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Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1812-1837. The individual dissertations were bound together during the 1930's. The original edition of materials for the bound volumes contained multiple errors in numbers, missing and/or extra pages. To address these errors, an added and "Corrected Table of Contents" has been inserted in the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Bedics, Historical Collections Librarian; Alison Mangione Pickar, Metadata Management Librarian; Angela Cochrane and Tom Harding, Library Assistants; Sarah Hartman, Alan Schwartz and Maggie Wood, Services Division.

These dissertations were digitized in 2014-2017 and are available in the HDL Digital Archive (archive.hdl.handle.net/) and on the Internet Archive (archive.org).

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The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1862 (a)

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Bolton, J. Henry	Chloroform in Parturition	
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Burch, James C.	Pericarditis	
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Carlin, James Sylvester	Scarlatina	(Bound out of order)[1]
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Fairbank, Samuel	Malaria	
Foreman, E. Knox	The Uterus and Its Functions	

[1] Thesis is bound out of order, as follows: 16-27; Title-15; 28-33 (end).

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

Author	Title	Notes
Frank, Samuel L.	Anaesthesia	
Freeny, Greensbury W.	Respiration	

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UNIVERSITY OF MARYLAND

THESES

1862 (a)

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Benson, ~~P.~~ Philander V.	The Stomach, Its Position, Condition and Pathological Alterations in the Animal Economy	27p.
Bolton, J. Henry	Chloroform in Parturition	23p.
Buhrman, Harvey	Development of the Foetus	29p.
Burch, ~~J.~~ James C.	Pericarditis	20p.
Burgess, ~~L.~~ Lloyd D.	Intermittent Fever	42p.
Carlin, ~~J.~~ James Sylvester	Scarlatina*	26p. pages cut of sheet
Conner, ~~J.~~ John A.	Clinical Report of Cases	27p.
Cooke, ~~O.~~ Octavius A.	Opium	29p.
Ensor, J. Fulton	Alcohol	29 p.
Everett, ~~Wm.~~ William B.	Clinical Report of Cases	29p.
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UNIVERSITY OF MARYLAND
LIBRARY
Founded 1813
SCHOOL OF MEDICINE

An

Inaugural Dissertation

on

Delirium Tremens

Submitted to the examination

of the

Provost Regent and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Elisha R. Ould.

of the State of Maryland

Class 1861-62

1Mb

Delirium Tremens.

This peculiar disease was first named & described by Dr. Sutton of Greenwich, in the year 1813. and before that period there was no distinction made between this affection and Phrenitis, & we may say that this important mistake sometimes happens to the ablest naturalists in the profession as it cannot be well understood.

Delirium Tremens is known by many names such as Mania a Potu, Drunkards fever or disease, with many others the nomenclature of which is usually descriptive of the disease.

This affection is caused by the sudden withdrawal of an accustomed

stimulant; and although I have said the symptoms, and treatment was well understood, I am sorry to state that notwithstanding the elevated condition of medical science nothing scarcely is known of the pathology of this disease, that is so prevalent in our midst, one reason may be given that this disease is almost always of a rapid termination and patients seldom have not the opportunity of having the post mortem in cases

Dr. Sand, Selby has investigated, and shown some light on this disease he found in certain substances of the Brain of a whitish and exsanguine appearance with the

venous canals distended with blood, and with a unusual amount of fluid in the Ventricles. In this disease there will be a anemic condition of the brain with great nervous prostration and debility from over stimulation.

Delirium Tremens is found in both civilized and savage life and is particularly prevalant in the United States, but is not confined to any grade of society but is more prevalant among the poorer class of people, principally on account of the bad quality and deleterious substances found mixed in liquors such as Strychnia Cocculus Indicus &c &c. It would be supposed the strongest liquors produce the disease

most readily first Brandy then Whisky next Gin Wines and other stimulating drinks of different kinds.

The delirium will be found a constant concomitant of this disease but the tremour is sometimes wanting. Some of the old Authors made two divisions of this disease first that which occurs from the cessation of the accustomed stimulant, secondly Delirium Ebriosorum or that a violent caused by continued stimulation which depends on a congested condition of the brain differing in its symptoms, and would require entirely [illegible] treatment according to the [illegible] and [illegible] [illegible] in delirium [illegible]

But this division is [illegible] discarded

at present and not any disease in that depending on a deprivation of the use of a stimulant is considered delirium tremens,

This affection may be simple or complicated, with other diseases of the brain, and is very common in surgical practice in the form of traumatic delirium after wounds and fracture of bones in persons addicted to drinking. This is very liable to occur when the stimulation is withdrawn.

And one of our chief duties in a case of traumatic delirium is to treat this disease with our regular medicines for delirium tremens before we resort to the powerful but not for surgeon's aid. The simplest of

traumatic delirium are the same as in simple delirium tremens the patient is regardless of his injury and demand the constant attention of his attendant in order to prevent him injuring the medical applications and wounding the injured part

The *symptoms* of simple delirium tremens is generally very characteristick and when once seen it will ever make a impression on the mind of the medical attendant so as to prevent any mistake in his diagnosis afterwards. It is by inquiring into the history of your patient that you can obtain information to assist you in your diagnosis not from the patient only but from his friends around him

*g if you please.

for but little reliance can be placed in his version of his disease

You will learn that your patient has been indulging in intoxicating liquors or has been sick and abstained suddenly from the use of such drinks for some time. He also complains of great bodily weakness with a sinking depression of his whole system he is easily frightened and greatly agitated with appearance of any one in his chamber or by ordinary conversation

His next symptom will likely be inability to sleep with considerable delirium and loss of appetite, his hands are tremulous and he has great difficulty in putting out his tongue but it reaches his chin or beyond

He has a constant thirst with a pulse generally soft, quick and compressible; his body will be found bathed in perspiration. His tongue is also coated and there is derangement of the digestive organs with constipation of the bowels.

There is often irritability of the stomach presenting all the signs of gastritis.

Another important sign is the hurried and wandering way which he will hand you an hour, appears anxious and agitated.

He will be generally obedient and childish disposed to injure his attendant and nurses. In bad cases there is a disposition to throw off the clothes on the floor or the bed clothes, he prefers

solitude in the most secure corner of the room. There is constant dread or desire to avoid impending danger by a patient with this disease
He often imagines somebody is seeking his destruction or is desirous of shooting him for some trivial cause and often imagines the house is on fire and he wishes to get near the window that he may escape
He often thinks some one is destroying his family, and that snakes rats and other hideous animals are after him,
Such are some of the most frequent phantasms of this horrible disease and one or more will always be present to prey upon the mind of the patient: and he will generally be

talking about these objects whenever the opportunity is offered.

If you demand the strict attention of your patient, you will generally get sensible answers to your interrogatories excepting bad cases where there is a very excitable condition. But when speaking to him of his dreams and imaginations he will fall back in a very fearful condition and beg to be spared from punishment and death.

Dr. Nelson in his valuable work on the practice of physic asserts that this disease is very uncommon among females and gives the experience of other good authorities to substantiate his assertion. It is quite natural to suppose that

this disease would be more common among men; but not to the extent that the author gives it, for cases are very numerous in our large cities and according to our Alms House report at least one fourth of our cases are females

The prognosis in this disease is very favourable when properly treated; the number admitted in the Baltimore City Alms House being eighty one in the year eighteen hundred and sixty of that number one proved fatal and this case was rapidly complicated with diffused phlegmonous and of inflammation we have very often met with in delirium tremens

The cases we have referred to are mostly confirmed inebriates & if

broken down constitutions and many having the disease very often,

"Treatment of Delirium Tremens."

In the treatment of this disease there is a great difference of opinion especially among American authorities such advocating this kind of treatment as the best.

Like all other diseases the pathology and nature not having been established has many remedies that are said to have a curative influence

The following are some of the remedies that have been most strongly recommended and used first, for surely it is entitled to the first enumeration is our great shield Anchor Opium.

Secondly Alcoholic and Ethereal stimu-

such as Brandy, Whiskey, Oil of Valerian and other Medical tinctures with Hoffmans Anodyne and Sulph. Ether that act directly on the nervous system and cerebral centres.

Thirdly medicines that act indirectly such as Emetics, Purgatives &c &c.

I have seen Chloroform used with most admirable results in this disease by inhalation, producing calm, quiet and protracted sleep followed its administration, and the patient was entirely rational on waking.

At the very onset of the disease Emetics are undoubtedly serviceable when there is a loaded stomach, nausea furred tongue, it increases the secretion and gives another good purpose that

of operating on the bowels.
Opium to fulfill the principle indications that of a stimulant and sedative produces sleep and calming irritation, it is an invaluable remedy. this will sometimes fail even when given in large doses. and if its use is continued in, under these circumstances it will be very injurious and liable to kill the patient outright, from its accumulating impact.
Hoffmans Anodyne much used to quiet nervous irritation of various forms and producing sleep. when its loss depends on nervous discomposure. This medicine does not appear to operate immediately on the Brain but the nervous system generally equalizing its action; and thus removing

the cause of wakefulness. The use of Brandy Whiskey, &c &c. is employed with great success but is opposed by many very justly in a moral point of view unless it is absolutely necessary to preserve life. at the loss of an such principle the Physician is bound to regard the life of his patient first.

But when we have such a valuable remedy as Opium generally is. there is no excuse for the Physician always resorting to Ardent Spirits, for it does appear as if this disease so dreadful in its consequences aught to prove a great warning to the inebriate and ruined. to cease from his downward path and shun a poisonous liquor as he would an adder.

It does undoubtedly, cried some on account of the horror and distress of the disease. thus proving a blessing in disguise or a visitation of providence warning the inebriate of the great enemy in the hands of wicked one But the majority of those affected repeatedly have this disease and in this way many a noble spirit has been wrecked, habits of intemperance having been gradually acquired under the pleasurable excitement of moderate stimulation ending in that sleep that knows no waking, a pitiless and premature grave,

I have witnessed the treatment by the remedies here named by Dr. [illegible] and the patients now are appearance

made their treatment part of their debauch and will more likely recover in the same condition after getting well of the delirium.

It is very gratifying to see many physicians with such a valuable remedy as opium in their hands discarding the use of cordial spirits, for great is the responsability resting on the practitioner in recommending them not only in the disease but in fevers and other diseases of long and severe existance during the commencement of convalescence for more an inebriate could be found who was first alcoholized to use these drinks by his medical attendant thus producing a state that is worse than the disease this kind of practice

practice unless absolutely demanded is greatly to be deprecated by all good Physicians

The following formula has been used for a number of years* and with great success in the treatment of Delirium Tremens, it cannot be too highly recommended

℞ Morphia Sulph gr 1/3
Tinct Lavend Comp
Spts Aether Comp aa ℥ss
Tinct Valerian ℥j
Mx ft Mist

This is to be taken every two or three according to the circumstances of the case sometimes the patient will have a very irritable stomach and resist this or almost any medicine but in this case

*in the Bell. Alms House

the employment of a hard pill of two grs
Opium or its equivalent of the Acetate
of Morphia, Enemas of the following
will be useful, in such cases also

℞ Tinct Opii gtt. LX
Mucilaginis Acaciæ ℥j
Tinct Catechu ℥ss
Mucil Amyli ℥iss
M. ft. Enema

This to be given every two hours until
sleep is produced

There are two other remedies I shall
mention in case these remedies seemed
to fail. first subcutaneous injection
of Sol Sulph Morphia secondly the
inhalation of Chloroform. the trial
of these I have had a very limited
experience in. but it appears to
have a good effect and is very

useful in cases of extreme gastric irritation or where the patient objects to swallow other remedies

The latter remedy the inhalation of chloroform has had a happy effect in curing cases of the worst type and that have resisted all other treatment. The patient remaining sleepless for several nights Chloroform was administered acted admirably producing sleep for three hours and bringing the pulse down from one hundred and twenty to eighty five the patient remained perfectly quiet all day and was well the next walking about the house

Aperient medicines [illegible] as bitter tinctures [illegible] Tonics will generally be required [illegible]

regulation of bowels

O though the aptite is not good generally, yet a proper regulation of the diet should not be overlooked low diet with farraceous food will be found among the auxiliaries in treating this disease.

The medicines recommended and the rept. of plenty of sunlight with a proper ventilation of the apartment, with good nursing and kindness to our patients, will answer every indication in treating this affection, and will be found successful in curing your yellow fever or a distressing and fatal disease

The Dissection of a Skull
belonging to the
Professional Faculty
of the
University of Maryland
For the degree of
Doctor of Medicine
Treating of the
Stomach Bones
Its position,
condition and
Pathological alterations
in the
Human Corpse
By
Philander W. Barber

To the

Trustees, Regents and Board

of the University of Maryland and

Faculty of Medicine

Gentlemen!

According to the [illegible]

which requires [illegible] the

degree of Doctor [illegible]

your most [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

For our dissertation the "Humana", not

attempting [illegible]

[illegible] but [illegible]

[illegible]

Pathol[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Practical and Scientific [illegible]

as the Art of [illegible] committed to your trust, & sciences conducive to the Prosperity [illegible]

of Mary

Respectfully submitted by

[illegible]

Lieut. Commdg.

Lieut. Commanding under the

instructions of the "Office and"

Hydrography [illegible]

To Dr Geo. W. Benson

[illegible]

[illegible] and [illegible] I dedicate my [illegible]

in [illegible] essay for [illegible] your attention to

a course of medical reading and the instruction

you so kindly imparted in pursuing your

own field of practice, I am induced to offer

as a candidate for graduation [illegible]

the degree of the [illegible] of this [illegible]

By inscribing my [illegible] work

to you, and thus associate my name [illegible]

[illegible]

my efforts [illegible]

[illegible]

efforts in [illegible]

[illegible]

[illegible]

[illegible]

Yours

J. Pupel

In the material world all objects
presented to the senses, require to
maintain their relations [illegible] of
a constant supply of material suitable
for assimilation to the different str-
uctures, that there is a constant change
or loss of substance in every tissue and
of [illegible] it being, [illegible] the change [illegible]
form and density of all objects [illegible]
render the [illegible] of the [illegible]
[illegible] and [illegible] by the
[illegible] [illegible] [illegible]
[illegible] of it is [illegible]
functions [illegible] and [illegible]
[illegible]ed, or an injury and loss of vital
[illegible] and [illegible],
[illegible]
[illegible] —

[illegible]

first, remains fixed in the soil from which it

[illegible]

The ground may be defended in various
particulars that are not so to a
state of living or an improved country.
Capital, [illegible], [illegible] &
maintain an [illegible] [illegible],
[illegible] [illegible], [illegible] [illegible]
for supplying the [illegible], [illegible] [illegible]
conduct with its good and [illegible]
appropriating, which may be [illegible]
for its maintenance.

In [illegible] we find a different and
higher organization, to [illegible] the [illegible]
of moving from one [illegible] to another.
This [illegible] has [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
and maintain a relative connection with
their [illegible] [illegible] [illegible] [illegible]

Creation has endowed them with a revenue —

or the [illegible] which is one of the most distinguishing features between animals and vegetables.

Digestion [illegible] requires [illegible] of food on animal and vegetable diet, can be accomplished only after it is reduced to a fluid form and therefore a cavity or stomach is necessary in which the solution can be effected.

Comparing the parts of the stomach of different animals with those of the human [illegible]

Digestion This organ occupies a [illegible] of the upper part of the abdomen, [illegible] from the [illegible] and extends from the left Hypochondrium to the right [illegible]

It is connected above with the [illegible]
[illegible] with the [illegible] intestine, [illegible],
and with the diaphragm [illegible]
[illegible] and [illegible]
by [illegible], to the right of the right
side of the [illegible] and to the left of
[illegible], [illegible] by [illegible] [illegible]
and in front the abdominal [illegible].
The Stomach [illegible] is [illegible] [illegible]
individually, [illegible] [illegible] [illegible]
the form of a large conical [illegible]
[illegible] from the [illegible] [illegible], [illegible]
[illegible] the [illegible], [illegible] [illegible]
the [illegible] of the [illegible] [illegible] [illegible]
a greater [illegible], [illegible] [illegible] [illegible]
[illegible] the [illegible] [illegible], [illegible]
[illegible], [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

the diameter of the most capacious
part ranges from four to five inches.
It occupies an oblique position within the
abdomen, being [illegible]
variations with [illegible]. The [illegible]
the anterior and posterior [illegible]
distinct during an empty state of the organ.
The two orifices presented are the Cardiac
which is the junction with the oesophagus,
and the Pylorus [illegible] the small
intestines. The greater and lesser curvatures
of the stomach are [illegible]
forward, which is longer than the [illegible]
described [illegible]
The greater [illegible]
[illegible]
[illegible]
The walls of the stomach are arranged [illegible]

[illegible] mucosa, [illegible]
and external coat is the Serous and is
derived from the peritoneum, it acts as
a lubricant for the organ movements it
in its simple position and is a strong
serous membrane which lubricates its movements
and prevents irritation by distending
its surface, it is a thin transparent membrane
covering the stomach with the exception of
the curvatures which intervene [illegible]
by blood vessels [illegible] and nerves
It is next in order is the Muscular coats, consisting
of [illegible] layers [illegible]
layers [illegible] a different direction,
the outer layer [illegible] of
the longitudinal [illegible] [illegible]
[illegible] the Pylorus. The second are arranged
transversely [illegible] [illegible]

[illegible] led in great number
to the Pacific [illegible] which had inflicted
Dikinden, The [illegible] of [illegible]
of [illegible] [illegible]
one or more [illegible] from the [illegible]
orifice over the [illegible] and [illegible]
and [illegible] the [illegible] of the [illegible]
the hundreds [illegible] of the [illegible]
and [illegible] to [illegible] the [illegible] and [illegible]
most important [illegible] of the [illegible]
the [illegible] [illegible]
[illegible] in [illegible] [illegible] [illegible]
[illegible] to the [illegible] [illegible]
line and [illegible] [illegible]
by which [illegible]
[illegible] [illegible]
The [illegible] [illegible]
[illegible] [illegible]

For instance the mind [illegible]
the substitution of [illegible] but it
would [illegible] be required in [illegible]
[illegible] portions.

The third coal of the Pittsburg [illegible]
[illegible] have [illegible] in a very
compact manner [illegible] the [illegible]
and [illegible] [illegible] it has [illegible]
and [illegible] [illegible] [illegible]
or [illegible].

The fourth [illegible] of the [illegible]
of the [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
this lamina is thrown into folds, at the
[illegible] [illegible]
[illegible]

and is called the Epididymis, at
the foot or side is located the vas deferens
constituting the spermatic cord, which
closes the tube and thus completes the
main part of the testicle. The cord
is distinguished by its great roundness
and the numerous glands with which
it is provided, by which the secretion is
eliminated and a second secretion
are exceedingly numerous and are
tubular form [illegible]
of the mucous coat.
The use of the Cremaster [illegible]
a certain [illegible] quantity of [illegible]
by an [illegible] [illegible]
[illegible] [illegible] [illegible]
the testicle. The [illegible]
[illegible] [illegible]

The Liver or [illegible] is [illegible] to be affected [illegible] the [illegible] against the action of irritants, [illegible] alkaline or [illegible] alkaline.

The Gastric juice is a fluid [illegible] perfectly clear [illegible] [illegible] in the Gastric Juice [illegible] by the analysis of [illegible] [illegible] our modern Physiologists [illegible] from their researches [illegible] to be [illegible] preserved.

The Stomach is [illegible] [illegible] with the [illegible] with the [illegible] ——

From the [illegible] of [illegible] the [illegible]
[illegible], [illegible] and [illegible] on
the whole [illegible] of the organ.
The [illegible] of the [illegible] are made up of
[illegible] filaments of the [illegible]
and the [illegible] [illegible] of the [illegible]
In the [illegible] there is strong
presumptive evidence that the [illegible]
of the condition and the [illegible]
[illegible] of the [illegible] [illegible] by the [illegible]
cation of an [illegible] to the [illegible]
produce the [illegible] of the [illegible].
The [illegible] seems to [illegible] [illegible]
functions of the [illegible] of the [illegible]
[illegible], secreting and [illegible] [illegible]
the [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]

[illegible] nervous action on the
liver [illegible] increasing equally
positive [illegible]

The question [illegible] on [illegible]
[illegible] the positive [illegible] fluid [illegible] of
a continued contraction and relaxation of
its muscular structure maintain a [illegible]
circumgyration [illegible] [illegible]
the food with the fluid, which is [illegible]
by the preparatory [illegible] [illegible]
the [illegible] [illegible] [illegible]
numerous [illegible] [illegible]
minute in [illegible] [illegible] [illegible]
[illegible] by the [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

coatings of the stomach to a uniform
[illegible] mass and to [illegible]
[illegible] of the excretion, it is [illegible]
to the [illegible] organs, [illegible] by an [illegible]
degree of intelligence [illegible] that the [illegible]
is endowed, for a [illegible] it is [illegible]
intestines to be subjected to the [illegible]
juices and secretions.

The stomach is [illegible] to [illegible]
[illegible], [illegible] the [illegible] of the
stomach [illegible] and [illegible] of a [illegible]
[illegible] weight [illegible] ; [illegible]
food [illegible] it is [illegible]
[illegible] to [illegible] from [illegible]
[illegible] [illegible]
[illegible], [illegible]
[illegible] [illegible]
[illegible] [illegible]
[illegible] of the [illegible] —

are causes of considerable perplexity
arising from deficient working of regulating
organs &c.

In the passing descent to solution the
Vitalistic organization is opened, the tissues
presently many indications of molecular
disorder which can only be explained by
an internal retrogressive into the molecular
nisus one feeling the only one of
mother tissues detected and the destruction
of one structure is closed by a morbid
state of matter, the energy of a living
being is perfectly exposing a mind
well stored with knowledge of all or
theoretical knowledge, it would be
premature for a novice to attempt a
delineation. [illegible]

[illegible] Cavity-Depth, [illegible]
and a Foot-plate.

On the location of the pits and [illegible]
[illegible], [illegible] of [illegible] by
an investigation of the [illegible]
lines of the [illegible] and [illegible]
the Arterial and Venous [illegible].

The most [illegible] question which [illegible]
attracts this [illegible] is [illegible]
[illegible]

A faithful [illegible] of the [illegible]
[illegible] to the [illegible], [illegible]
[illegible] the [illegible] [illegible],
[illegible] [illegible] [illegible]
[illegible], [illegible] [illegible]
[illegible], [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

The [illegible] is [illegible]
it occurs most frequently in [illegible]
[illegible] experiment, [illegible] food, and
acid beverages, [illegible] in a [illegible] [illegible]
[illegible] and [illegible] [illegible], the [illegible]
use of [illegible] liquors may [illegible] to an
attack of [illegible]. The pain [illegible]
is described as acute, [illegible], [illegible]
[illegible] or [illegible] [illegible] and [illegible] [illegible]
attacks of pain may follow each other in
rapid succession or [illegible] [illegible], [illegible]
occur at [illegible] or [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [

[illegible] indication and give [illegible] complete
[illegible] a [illegible] disorder in [illegible] and
be associated with [illegible] but [illegible]
is a well regulated diet.

Gastritis, inflammation of the stomach is
[illegible] or confined [illegible] in
the region of the stomach, with [illegible]
and [illegible] [illegible] and [illegible]
[illegible] with [illegible] [illegible]
or [illegible]. The [illegible] are [illegible] by [illegible]
inflammation in [illegible] [illegible] [illegible]
[illegible] [illegible], [illegible] or
[illegible] [illegible] [illegible],
[illegible] of temperature [illegible] [illegible]
[illegible] [illegible], [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible], [illegible] [illegible]
disorder, [illegible] [illegible] [illegible] —

surrounding viscera &c.

[illegible] by assuming a [illegible] of [illegible] the [illegible] of [illegible] complicated and [illegible] plot [illegible] Statistically divide it into the acute and chronic and both [illegible] stages, including the acute and [illegible] forms, the mild form of [illegible] in the [illegible] and [illegible] and [illegible] the [illegible] form of the [illegible] caused by [illegible] the [illegible] condition of the [illegible] [illegible] by the [illegible] and excess in [illegible], stimulating [illegible] and the use of spirits [illegible] the [illegible] in one in which the [illegible] [illegible] to [illegible] in [illegible] coal.

The symptoms of the mild form are general uneasiness in the region of the stomach especially after meals, a sense of burning with flatulence, and constipation. In the severe form the symptoms of the strong and unmodified poison are an excess of the secretion of bile combined with evidence of irritation of a much more acute character, a furred tongue and often vomiting, inflammation of the mucous structure of the adjoining digestive tract.

3. The Drunk and moral form of Cholera, may occur especially when the [illegible] of the disease [illegible] in the presence of the causes and in [illegible] and in the absence of proper [illegible] allowing a [illegible]

Idiopathic rabies will also be imparted by corroding ulcers, the wound, the [illegible] is visibly increased by repletion, the mental prostration of the powers of life, the [illegible] of the disease is rapid, the pulse becomes feeble, the extremities cold and [illegible] in most cases. Chronic Rabies is the result of a complete obliteration through injudicious treatment, which consists of the [illegible] appointed [illegible] to the head [illegible] completely and are thus ultimately relieved by [illegible] other organic lesions and [illegible] life.

The diagnosis of the mild form of the disease is more difficult than the acute variety;

In the uncomplicated form of the disease the prognosis may be [illegible] by suitable treatment, which consists in as —

After [illegible] of the [illegible] in
removing the exciting cause, [illegible] the
inflammatory action and restoring the
healthy function of the organs. Saline cathartics
or cathartic enemata [illegible] relieve the viscera
from the action of irritants, the mildest
farinaceous diet should be strictly
adhered to. When irritants, having [illegible] the
cause of the attack, irritability and [illegible],
are indicated, [illegible] by small [illegible]
[illegible]
[illegible]
[illegible]
[illegible] or [illegible] of the [illegible] and
[illegible] are found [illegible]
is [illegible]
by taking [illegible]
[illegible] the [illegible] —

should consist of farinaceous food with
mild aperitive tonics, in an healthy
change of air and exercise, moderate
with abstinence from all morbid exciting
causes a speedy recovery.

The stomach of horses from the act
of ulceration which may extend to perforation
of its walls and the escape of its contents
into the adjoining cavity of the abdomen
cavity inducing fatal peritonitis.

The causes are irritation and inflammation
of the lining of the inner coat, caused in
neighboring parts extending into the stomach,
[illegible]
the mucous coat of the stomach is
ulcerated, [illegible]

The symptoms are [illegible]
with [illegible]

[illegible] diseases are [illegible] the [illegible]
of [illegible] after the [illegible] [illegible]
[illegible] and the [illegible] [illegible] [illegible]
[illegible] and a good [illegible]
[illegible] The [illegible] and [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
and [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible]

[illegible]

[illegible] of [illegible] matter [illegible] of food, [illegible] thirst, diarrhoea [illegible] and [illegible] prostration. [illegible] commencement of the [illegible] quick and small, death takes place in a few days and [illegible] in a fortnight. The treatment consists in [illegible] comforting and [illegible] light [illegible] such treatment [illegible] the [illegible] of the stomach, the [illegible] of [illegible] and [illegible] [illegible] [illegible] the [illegible] [illegible] [illegible]

[illegible]

are said to act as causes. –

The fundamental remedy in relieving [illegible] morbid symptoms that may present themselves by [illegible] is [illegible] to [illegible] the [illegible] [illegible] [illegible], which is [illegible] [illegible] by the [illegible] of [illegible], [illegible] [illegible] associated with other symptoms. [illegible] results from irritation and, in [illegible] inanition, the palliative treatment to protract life and [illegible] [illegible] is the best and only one.

There are other [illegible] of the [illegible] which are distinguished after death [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible], [illegible] of the [illegible], which is either increased or diminished, [illegible] [illegible] [illegible], [illegible] by an alteration [illegible] of [illegible] [illegible] —

now Gentlemen having considered
the Thomas Almanac as a subject for
an essay to be critically by you criticised
and asking your kindly aid after you
have perused its pages, and noted
its many defects. Awaiting your
decision I will bid you adieu the first and
hours finished.

With much respect and many thanks
for instructions you have given me

I am

Philander C. Bates

Maryland

1862

An Inaugural Dissertation

on Chloroform Intoxication.

By J. Henry Bolton

Presented to the Faculty

of the

University of Maryland.

Chloroform in Parturition.

To the indefatigable efforts of Professor Simpson of Edinburgh justly belongs the honour of first introducing the use of chloroform for the relief of human suffering in parturition, which it has been the fate of the daughters of Eve to undergo, since she with uncommon father Adam was driven from their blissful abode in Paradise

"Fleeting joys
Of Paradise dear bought with lasting woes"

So writes Milton in his Paradise Lost. Some of these woes may be averted by the use of chloroform not only in parturition, but in surgical operations and morbid pain. There is great objection made to the use of chloroform in labour, by those who are superstitiously religious owing to the curse of the Almighty which may be found in Genesis chapter iii verse xvi. The words are. Unto the woman he said; "I will greatly

multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children, and thy desire shall be to thy husband, and he shall rule over thee." If our creator intended that the pains of child-birth should be forever inevitable no power of man could in the last alter his decision. The inspired says by the sweat of his brow shall man gain his bread. The first application of chloroform for alleviation of pain was

to have been made by Doctors Morton and Jackson of Boston, one a dentist the other a lecturer on chemistry; each one of these claims the credit of discovering the application of chloroform as an anaesthetic agent. There being two rival claimants led to a printers ink duel, for a decision as to which of the two should have his name handed down to posterity as the originator of the fad of surgery made easy.

and also for the adhe-
sive coffers which would
follow to the low decorators during life.

Chloroform or chemical technicology is a chloride of Formyl; its composition being two atoms of carbon, three of chlorine and one of hydrogen; its formula is C_2HCl_3.

Physical Properties. A clear limpid liquid, boils at 140 Fh. Spec. grav. 1.48 heavy fluid smells and tastes sweet. It has great solvent powers, as not a

flammable, very volatile. It sometimes contains alcohol and sulphurous acids. The alcoholic impurity may be suspected when its specific gravity is less than 1.00 or higher than 1.100. It is not fit for inhalation. Sulphurous acid may be detected by means of a solution of chloride of baryta, producing a precipitate of sulphate of baryta if sulphurous acid be present. It also contains hydrogen oils. These may be detected by the

use of pure and strong sulphuric acid. Pure chloroform when mixed with an equal volume of the acid does not colour it but when contaminated with this oil gives the acid a colour varying from yellow to reddish brown, according to the amount of impurity present. Pure chloroform will not stain a piece of white filter paper poured upon it and allowed to evaporate, neither should any odour remain.

The physiological effects of chloroform may be enumerated as follows. Firstly. That of inhalation which is usually not disagreeable if only taken for amusement or curiosity but when taken for habitually to an excess causes great distress. Consciousness of surrounding objects is not affected although the sense of vision is slightly obscured. Very pain is more or less relieved according to its intensity.

Secondly. The mental functions are impaired, a kind of delirium is produced analogous to the condition of a person who might be called light, but not so far gone as to be deemed dead drunk. When in this state the patient may be aroused and if the inhalation be not carried any farther its effects soon pass off. In this condition the person often becomes difficult to manage as all who have seen the form much used, could

not have failed to relieve. Thirdly; its use being continued all voluntary motion is lost and the media contractions of the muscles sometimes occur. All consciousness is lost, the eyes are often forcibly turned upwards, and the conjunctiva sometimes injected with blood. Fourthly; In this condition have relaxation of the voluntary muscles. It is to this condition we must bring a patient, preparatory to the extraction

of a lopped joint. The breathing is not unfrequently stertorous. The sensation of pain is lost. Reflex action cannot be produced even by irritating the most sensitive parts of the body; yet some of the functions of the spinal cord remain; the sphincters are contracted. Fifthly, if the anæsthetic agent is still applied, it will affect the nerves of organic life, and life will soon become extinct; the breathing becom-

ing irregular slow and difficult, soon ceasing altogether. The heart usually continues to beat for a short time although respiration has been discontinued.

At first the Jenson and Morton Sanatorium, brought under its influence the functions of the brain is kept arrested and unsuspicious. A total suspension of consciousness, reducing life to a series of automatic movements. When the Metalla Allongata

and the Spinal centres become involved and lastly the Ganglionic system when the action of the heart is arrested and life cannot no longer be supported. From the physiological phenomena produced by the use of chloroform, it is evident to a thinking that it cannot be used without danger, even though great care is taken as to the amount inhaled, its proper admixture with atmospheric air, and to the condition of the

patient as to whether there exists any organic disease. The indiscriminate use of chloroform cannot be too strongly condemned. It is dangerous to both mother and child. There are some physicians who use it in every case of labour to which they are called, altogether regardless of the pains of labour being normal and nature's way of delivery. Experience has proved from the birth of Christ to the present day that na-

nature is able ordinarily to carry woman safely through the dangers of labour without any interference of art, with the exceptions either of some abnormal condition of the pelvis, of the size of the foetal head, of the presentation, or of the uterus. Dr. Keiss in writing on the use of chloroform in parturition uses these words; "Should I exhibit the remedy to a thousand patients in labour nineteen hundred and ninety-

ical faint and for no other motive, and I should in consequence destroy only one of them, I should feel disposed to clothe me in sackcloth and cast ashes on my head the remainder of my days."

Indifferently of death from an over-dose of chloroform and any idiosyncrasy of the patient, can it be proved that no minor casualties suffer from its use, derogatory to the future health of the patient. Dr Hamilton

says that three instances of puerperal mania have come under his notice, which were caused without a doubt by the use of chloroform, and that he had heard of several others. There are other morbid manifestations that have been observed by reliable members of the medical profession, caused by the use of this powerful anaesthetic. Some of which are as follows. Hysterical fotions as are as the effect of

the vapor becomes opaqueant have a paroxysm of hysteria. Epileptic persons are liable to have an attack brought on by its use; indeed so opaque is its effects upon epileptics that M Fig a surgeon in the French army says that the simulated disease may be detected from the true disorder by its use; it bringing on a fit in the epileptic but in the simulated disease only producing its ordinary effects.

There are many eminent medical men who approve of its use in parturition and there are many who are opposed to its use. When used the following rules may be taken into consideration. In harassing, lingering labours the suffering from which is extreme situated as it is in the abdominal muscles the back and the hips. Anæsthetics given in these cases affected not only the patient but also the powers of the [illegible]

cuperate without interfering with the labour.
In all positions of the head where the occiput instead of passing out under the symphysis has to glide over the whole sacro-coccygeal curve and the soft parts. A retaining agent in such a case not only lessens suffering but expedites the delivery.
In a first labour or sometimes in even other labours the different stages having been very long and labo-

ious, it often happens when the head reaches the outlet that the female, worn out by previous suffering, is melancholy and despondent and the perineum by its resistance threatens to protract the labor. An anaesthetic under such circumstances gives almost immediate relief.

The forceps, and all instrumental delivery, especially in eclampsia, when the maternal feelings are spared the horror of hearing appreciating the effects of the operation performed on herself

spring and when there is undue rigidity of the os uteri.

In all cases of turning but especially in those where the waters having been evacuated for sometime a violent contraction of the uterus upon the fœtus has taken place, to such an extent as to prevent any operation until relaxation is obtained. The most effective means in such cases are anæsthetics; for under the former practice, the difficult reported to after

provoked secondary hæmorrhage by exhausting the female.

In all cases of hysterical convulsions, where the means of excitability is such as to interfere with the natural process of labour, and in extracting the placenta, where there are irregular contractions or spasms of the uterus, as in hour glass contraction.

Inaugural Dissertation

on the

Development of the Pelvis:

Submitted to the examination

of the

Provost, Regents and Faculty of Physic

of the

University of Maryland,

for the degree

of

Doctor of Medicine,

by

Harvey Bahrman,

of

Maryland.

From the long and almost unfathomable catalogue of interesting and important facts presented to us by the science of medicine, we do not find it difficult to select some subject worthy to discuss.

But after we have made choice of a subject, doubtless difficulty arises. To the mind of the inexperienced student of medicine many important points perplexing and difficulties which at first sight appear insurmountable, and it is only by diligent toil and unremitting study that he can remove the difficulties which perplex and cause to retreat, easily as we can, Second, only a theoretical knowledge of the subject. Therefore I said, for the student to be able to practice the art of medicine can only give the theory and a

[illegible]

The subject which I have chosen for my paper is one of, both importance and interest; of importance in the many physical changes it brought about and brought out so beautifully and with such uniformity by nature, and it must prove to be interesting as it shows the development of [illegible]

It is not my intention to go into the details of the physical operation but to [illegible] the [illegible] which take place in the [illegible] of the land. Nevertheless I shall refer to and speak of the ocean as [illegible] and notice the [illegible] component parts of the [illegible] [illegible] relation to that [illegible] [illegible] the [illegible]

According to many physiologists ([illegible]
[illegible] they [illegible]
to find the [illegible] at the [illegible]
or [illegible] it is [illegible] from the [illegible] [illegible]
of the [illegible] [illegible]
which is an oily or granular liquid known
as the vitellus or yolk, and in the [illegible] of the
to find the [illegible] [illegible] of the
germinal spot. This [illegible]
by the [illegible] is [illegible] by the [illegible]
of the fallopian tubes and of that [illegible]
under [illegible] at the ovaries. We [illegible]
[illegible] at the [illegible] It is [illegible] by
the [illegible] [illegible] [illegible] the [illegible] of
it comes in contact with the [illegible]
of the male, and fecundation or impregnation is the result.

It is at this point that the [illegible]
[illegible] changes begins to take place.
The first of these changes is which I have
[illegible] is the thickening of the [illegible]
[illegible] that [illegible]
[illegible] a [illegible]
which [illegible] a [illegible]
appears after the [illegible] the [illegible]
of the [illegible] line, but at the [illegible]
the partial disappearance of this albuminous
coating which it receives, a [illegible] gelatinous
coating [illegible] the [illegible]
[illegible] the [illegible]
During the period in which these changes
are being brought out, the [illegible]
of the [illegible] [illegible] and
greater consistency, and [illegible] upon

which [illegible]

space; to make up for this, or to [illegible] up this [illegible]

compact, Nature provides to clear [illegible]

at [illegible]

[illegible] and [illegible] to the [illegible].

By this [illegible]

[illegible] the [illegible]

[illegible] the portion of the [illegible]

we find the [illegible]

[illegible]

in the [illegible]. [illegible]

hitherto presented no peculiar phenomena

[illegible]

[illegible] changes. [illegible]

[illegible]

[illegible]

[illegible] explore, daily love and admiration the [illegible]

[illegible] calling us its name. Now inspires the [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] phenomena. By this time the [illegible]

[illegible] has touched the [illegible].

Reading thus far traced the [illegible] in all its various changes so many with [illegible] [illegible]

[illegible] the [illegible].

[illegible]

[illegible]

[illegible]

[illegible]

the mucous membrane be ensuing hyphyema [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ous membrane is thrown out [illegible]

[illegible]

[illegible] of the membrane is [illegible]

[illegible]

[illegible]

[illegible]

more than the [illegible]
alveolus hypertrophied.

[illegible]
of the [illegible]
of the irritation it has caused to lime or
[illegible] forming, first of
a granules springing up all around the
[illegible] the [illegible] into alveolus.
[illegible] the whole [illegible] covered of flat
cell like [illegible], [illegible] it [illegible]
as the [illegible] [illegible] [illegible]
[illegible] [illegible] of the [illegible] [illegible]
more [illegible] at another place.
We will now [illegible] the [illegible]
[illegible]
it [illegible] the [illegible] and it
caught by the [illegible] [illegible].

[illegible]

[illegible] Office of the Telegraphic Lines

[illegible]

[illegible]

[illegible] Intelligence [illegible] and their [illegible]

[illegible] of atmosphere around its external surface

[illegible] by the condensation of the [illegible]

[illegible]

[illegible]

[illegible]

become quite apparent. This [illegible]

[illegible] which is known as the [illegible]

membrane is enlarged and swelling [illegible]
[illegible] and [illegible]
[illegible] spread. Soon after the formation of this
[illegible] membrane, a [illegible] pus
[illegible]
[illegible] front of its surface, which is the [illegible]
[illegible] spot. We now find that the [illegible]
[illegible] by an outer or serous coat from
which we find all animal smaller than
speed, and an inner or mucous coat
from which the intestines are lighted
[illegible]

[illegible]
[illegible] find an enlarged tubercle pus
and in such a manner as to give it an elevated
[illegible] of a [illegible]
If we here remove very closely an [illegible]

[illegible] a projection of the [illegible]

towards the [illegible] membrane, with its

convexity looking towards the [illegible]

[illegible] passes [illegible]

of the [illegible]

[illegible]

[illegible]

[illegible]

[illegible] Cauda [illegible]

[illegible] portion of the

bottom [illegible]

[illegible] surface of the [illegible]

[illegible]

with its [illegible]

[illegible]

[illegible] of the [illegible]

every reason to believe that they are the

beginning of the previous tuffs which at [illegible]
[illegible] of this heavy tuff. While these changes were being [illegible]
[illegible] Cavalo and [illegible]
[illegible] till by their infolding they resemble as their
name here indicates, the Cephalic and
[illegible]. [illegible] Cortez
[illegible] they at last, [illegible]
[illegible] and [illegible]
[illegible]
[illegible]
[illegible]

[illegible]

[illegible]

[illegible]

This [illegible] the Amnion and the liquid which is [illegible] Amnion as the Amniotic fluid.

The external surface of the foetus we find [illegible] fusion of liquid between these parts the [illegible] by the fusion of the two membranes [illegible] which I will speak more fully in connection with the formation [illegible]

It may not be out of the way here to de-
scribe the effects of the Ammonia and am-
niotic liquid, and to this I will now
proceed: [illegible]
in [illegible] Ammonia [illegible]
or sac around the the foetus, this sac does
not undergo much change during the fœ-
tal development of the foetus, except it becomes
[illegible] a portion [illegible]
of the [illegible] high,
and it containing any serous exudation
[illegible] Albumen.
If [illegible]
a [illegible] filled with a liquid
[illegible], which at the commencement of gesta-
tion is of slight density and more or less
[illegible]

[illegible] it becoming [illegible] and more [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
is as clear as serum, again we find it of
a pale [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
amount present, in others the quantity is
enormous; the average is about [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
It is [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible] [illegible]
[illegible], as some [illegible], [illegible]
[illegible] the nutrition of the [illegible] [illegible] a part
of [illegible], also to [illegible] the [illegible]
[illegible] [illegible] [illegible] [illegible] of the [illegible]
which would otherwise [illegible] [illegible]

[illegible] without this [illegible].

She [illegible] that this [illegible] [illegible] the fetus from the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Again we must not forget to mention the important office they perform during [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] at the margins: [illegible] under the mucous or intestinal cavity communicates with the [illegible] [illegible] only by a small and [illegible] [illegible] [illegible] [illegible] of the [illegible] [illegible] [illegible] [illegible]

[illegible] that it [illegible]
[illegible], only by a very slender partition.
At the [illegible] we
find this to be the case, [illegible]
[illegible] the [illegible]
to form and the outer envelope of the ovum,
and as the Albumen, (of which we shall speak
[illegible]) is [illegible]
[illegible] are in relation to the development of
the [illegible], [illegible] to
[illegible] very [illegible] [illegible].
But before [illegible]
[illegible]
[illegible] it [illegible]
[illegible] it [illegible]. [illegible]
yellowish fluid in which [illegible]

[illegible]

[illegible] for the [illegible] of [illegible]
[illegible] and vein. The first of which are the
[illegible] that is the vein (Vena [illegible]) [illegible]
[illegible] the [illegible] and the
[illegible] and their [illegible] open into the
[illegible] in [illegible] the [illegible] in [illegible]
the liver. In its passage, branches are given
off to the stomach and [illegible] [illegible]
[illegible] back to the heart.

Several vessels of which are their [illegible]
[illegible] [illegible] [illegible] [illegible]
on the aorta, and giving the blood
of [illegible] [illegible] [illegible]
[illegible] to the [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

(Ileo

[illegible]
act as a reservoir for the fluids destined to
[illegible] during the
first weeks of intra uterine life.
Leaving this [illegible]
[illegible]
annihilation, we will take up and notice
[illegible]
are being wrought out, that of the Allantois
to which I have hitherto alluded.
At [illegible]
[illegible] speaking, are going on, we might [illegible]
[illegible]
out the inferior abdominal [illegible] and as
this becomes elongated [illegible] find it [illegible]
[illegible]
[illegible]

[illegible] developed the fœtal passing through the [illegible] to the umbilical vessels, and spreading its [illegible] in contact with the [illegible] in [illegible] in [illegible] the [illegible] color connection set up between mother and child. [illegible] bodies will be shown [illegible] the [illegible] the Ovum, and we shall speak still more minutely in regard to the [illegible] development of the placenta.

The upper portion [illegible] of the chorion are left adjacent by [illegible] ligamentous. [illegible] see that it is formed of the trophoblast and allantois. It is the most external of all the foetal membranes, and will be the decidua. Some twelve or fourteen days after impregnation the blood [illegible] this chorion becomes [illegible] and the [illegible] left [illegible] of the [illegible] and in apposition to the decidua [illegible] and disappears, [illegible] that are in direct [illegible] the [illegible] [illegible] [illegible] [illegible] of the [illegible].

This Organ is essentialy vascular a soft [illegible] [illegible] [illegible] [illegible] and a half to three fourths of an inch in thickness and [illegible] to [illegible] inches in diametre.

The foetal Surface is concave; and shows numerous ramifications of the umbilical arteries and vein, all of which converge to the centre to form the umbilical cord.

The uterine surface is [illegible] than the foetal [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] of [illegible].

The [illegible] of [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible]

functions, has long been the theme
of warm discussions. Some assert, one
[illegible] with the [illegible] most [illegible].
But after many [illegible] the [illegible]
theory [illegible] but it is
[illegible] of the [illegible] of the
[illegible] of the [illegible] [illegible]
[illegible] that the [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

[illegible] that is, some contend
[illegible]
the decidua serotina and that the
[illegible] others contend it is formed in some
this manner. We know that if one
wishes to separate the placenta from
the uterus, she does it at the spongy
[illegible]
tissue which separates and holds the
[illegible]
[illegible] that the true
[illegible]
admitting this to be so, but must
necessarily have the placenta
formed by and through some
[illegible] membrane; either it is

through the decidua vera or the decidua reflexa, or some oth

[illegible]

It is through this organ that the vital connection is set up between mother and child, but it has [illegible] that [illegible] contact between the chorion of one and the [illegible] of the other [illegible] of cotyledons.

[illegible]

oxygenated by this organ is carried by the umbilical vein to the child through the umbilical opening, where immediately [illegible]

[illegible] auricles, part going to the [illegible] through the [illegible] pulmonary, the rest [illegible] the aorta descends through the auricles [illegible] as, where it is mixed with the [illegible] and from the lower extremities."

"The blood that [illegible] the lungs is supplied by the [illegible] pulmonary vein [illegible] it [illegible] [illegible] which [illegible] [illegible] [illegible] into the **right** [illegible]

From the right auricle it passes through the foramen ovale, into the left auricle, thence into the left ventricle, and into the aorta [illegible] [illegible] to the system [illegible] [illegible] [illegible]

The latter blood, that from the head and upper extremities, is collected by the descending vena cava and emptied down into the right auricle. From it it passes into the right ventricle, thence passing through the valve it is ejected into the aorta a small portion only passing into the pulmonary artery.

After birth the current is [illegible] by inflation and to the vessels into the lungs.

The ductus venosus and ductus bonalis of the foramen ovale, the foramen ovale closes and the pulmonary artery and veins become dilated to receive the increased flow [illegible] for that the

[illegible]

[illegible]

[illegible] duration of his [illegible].

[illegible]

[illegible] be said; the average duration being about one hundred and twenty five or eighty days.

Some [illegible] [illegible] of this [illegible] found it.

[illegible] I may meet with the approbation of all who peruse its pages. I respectfully submit it.

H. Bohrman.

An

Inaugural Dissertation

On

Pericarditis

Submitted to the Examination
of the

Board Regents and Faculty of Physic
of the

University of Maryland,
for the Degree

Doctor of Medicine,
by

James E. Reed.

It is with many misgivings that I have selected Pericarditis as the subject of my essay, the diagnosis of which, until recently, has been involved in doubts and obscurity; but being aware that there is nothing new expected to be brought forth by the labors of the inexperienced student, I have selected it with the hope that, at least I may render myself better acquainted with this very interesting malady, than I otherwise, possibly, might be. Pericarditis is inflammation of the pericardium which is the fibrous investing membrane of the heart, the anatomical lesions detected after cases have terminated fatally are extremely various in some instances an examination reveals a deposit alone, which may be in patches or streaks of different form and dimension. Here a deposit however unaccompanied with liquid effusion cannot be considered as positively indicative of inflammation, for it may be caused by congestion alone, or it may be simply cadaveric. Very soon after the commencement of the attack, there

is, from the internal surface of the
membrane, an increased secretion. The matter
secreted is in some cases almost exclusively
coagulable lymph, which concretes as
soon as it exudes; in others it is serum which
remains liquid; but generally, it is a mixture
of the two: the fibrinous exudation adhering
to the surface, and the serum accumulating
in the pericardial sac with flocculi of the
concrete matter floating in it. The quantity
of the fluid varies greatly in some cases
it amounts to three fluidounces, in
others to the same number of pints. Frequently
it is limpid and nearly without color
but more frequently it is yellowish
sometimes it is of a sanguineous appearance
In some cases it is sero-purulent: and
rare cases occur in which it is pus originally.
The deposited lymph assumes a variety
of forms, but the predominant appearance
seems to be that of roughness, and has
been differently compared by different
authors to honeycomb, to the substance
of sponge, to the internal surface of

a calf's stomach and to a layer of butter
rubbed between two pieces of glass and
separated. This roughness is undoubtedly due
to the alternate meeting and separating of
the cardiac and free surfaces of the membrane
with the alternate dilatation and contraction
of the heart. In some instances this exudation
extends over the whole serous surface, in
others it is confined to the cardiac
surface, and in other cases to the free
surface of the membrane; but more generally
it is distributed irregularly in patches,
varying greatly in extent. When the patch
is chiefly in vicinity coronary trough the
cardiac and free surfaces may be readily
separated, still this matter becomes readily
incipient blood vessels make their appearance
finally it becomes organized and the
surfaces remain adherent at first
it is but imperfectly organized, but
through the medium of absorption and
the consequent removal of all superfluous
matter, perfectly as scarcely to be detected
from original structure. In the greater

number of cases the effusion at the commencement of the disease is considerable preventing the surfaces adhering. But as the process of absorption goes on the surfaces meet, and adhesion takes place in other cases though very rarely the fibrin becomes organized before absorption has gone on sufficiently far to bring the surfaces in contact, and in such cases, after the fatal termination from other causes the surface of the heart is observed to be covered with fibrous membrane, without any obliteration of the pericardial cavity. When two of these patches of coagulated lymph are opposite, they unite, and without obliterating the pericardial cavity, divide it into two sections. But in other instances the union is not sufficient to resist the actions of the heart and the plastic lymph is drawn out in filaments or bands, and being organized, form permanent bands, after the parts are not opposite, in such cases they equally become converted into fibrous

showing white spots on the surface of the heart. Sometimes the effusion is but partly absorbed, and in such cases adhesions are effected. In these cases layer after layer of coagulable lymph is secreted, the last secreted being the softest and forming a surface for the secretion of the next, when these layers are brought into contact they are too readily to admit of perfect organization. Consequently it is converted into fibrous, fibro cartilaginous or even a bony mass surrounding the heart, acting as a constant stimulus to that organ, producing hypertrophy or by embarrassing its actions atrophy of the heart. The substance of the heart is often morbidly affected in cases that have terminated fatally. In reaction to color it is redder browner, or paler than in health; in consistence it is harder or softer than natural; in bulk it is increased as in hypertrophy, or diminished as in atrophy. The general signs vary according to the stage of the disease. The first sign which may be observed is increased action of the

heart giving a louder sound and the impulse being stronger than in health which is appreciated by the patient himself. When there is effusion dulness is observed to a greater extent than natural, it is not generally perceived at the commencement of the disease. Nor until it has continued for two or three days though in some instances a copious effusion is one of the earliest signs. In extreme cases the extent of the effusion and consequently the dulness is very great extending from the false ribs to the clavicles and over the base of the heart a space of eight or ten inches. When the effusion is moderate the patient should be examined in the sitting posture as it would, when in the recumbent posture, be seperated by gravitation from the anterior walls of the chest. Other signs arise on account of the effusion as a displacement of the surrounding parts, and over the region of the heart in health, and diminution of the sounds of the heart caused by the intervening fluid. The impulse of the heart is

much diminished and in some cases the sounds cannot be heard at all. Still another phenomenon depending upon the effusion is a prominence at the praecordial region observable by the eye. Another sign of sound is observable in cases in which the above mentioned are not present. These are the friction sounds produced by the rubbing of the opposite surfaces together. They are dependent upon the dryness of the surfaces in the commencement of the disease, and afterwards as uncommon by the surfaces being roughened by the coagulable lymph. They vary greatly according to the roughness of the surfaces and the energy with which contractions are ordinarily form a [illegible] expiration, which is similar to that of [illegible] and is [illegible] to resemble the bellows murmur. The harsher sounds are characteristic of [illegible] or spasing, the softer sound is [illegible] in the commencement of the disease [illegible] is observable at a time only [illegible] before the cardiac sounds are separated [illegible]

effusion or have become adherent. When the effusion is slight the sound should be sought near the base of the heart about the middle of the sternum. Moderate pressure with the stethoscope will in some cases cause the sound to be heard, when otherwise it would not be observed. The sound will of course cease when effusion has taken place to such an extent as to seperate the surfaces, or when they have united by adhesion. The friction sound lost consequent upon the liquid effusion is again heard after absorption has taken place to such an extent as to bring the surfaces in contact. But the existence of the sound is very brief, for the surfaces contract adhesions and by becoming firmly united, the sound is again lost. The friction sounds may then be heard from the commencement of the disease to termination. The general symptoms of pericarditis are [illegible], but are different in different cases though when occurring [illegible] they may serve to indicate the presence of pericarditis.

with no approach almost to certainty.
But as a general rule they are wholly
inadequate to a correct diagnosis. It is
generally ushered in by a chill followed
by inflammatory fever accompanied by
pain, oppression or weight in the chest,
dyspnoea, palpitations, cough, headache and delirium
occasional vomiting, frequent and irregular pulse,
and edema of the face and lower extremities. ---
Fever is universally present, unless in very mild
cases, attended with the usual signs, hot and
dry skin, furred tongue, frequent pulse and
loss of appetite. The pulse is said to be an important
symptom. It is stated by Dr Craik that an
intermittent pulse, when there is reason to suspect
cardiac disease is a very suspicious symptom,
indicating the approach of pericarditis or
endocarditis. [illegible] after the fever
is very established, it is increased in frequency
beating from 110 to 120 in a minute, at the
commencement of the disease it is [illegible]
full and strong [illegible]
small and [illegible]
it becomes irregular, [illegible]

strokes and then intermitting one. Towards the termination of the disease the pulse becomes very feeble so as scarcely to be felt at the wrist and this feebleness being appreciable while the actions of the heart are apparently tumultuous. Pain is a symptom not to be relied on; sometimes it is very acute over the precordial region shooting through to the back between the shoulders and down the left arm; it is said by some authors that this excruciating pain never occurs unless the pleura is involved in the inflammation, but it is generally admitted that inflammation of the pericardium alone may occasion it though very rarely. More generally it is dull varously described as a feeling of tightness or oppression and occasionally involving the left shoulder. There are other cases in which there is no pain nor any feeling which would be calculated to direct attention to the heart. The dyspnoea which occurs in most though not all cases is generally very distressing. It is probably in part a reflex phenomenon although in some cases dependent upon

compression of the lungs occasioned by the liquid effusion, occasionally it is so severe that the chest visibly heaves in respiration; the patient prefers to sit up with his chest leaning forward and inclined to the left. ---- Cough though it may attend Pericarditis is not a prominent symptom unless the case be complicated with some other malady. Disturbance of the cerebral functions is not an uncommon occurrence, made manifest by headache, disturbed sleep, frightful dreams or delirium. These symptoms have been so severe with so little obvious cardiac disease that they have, I believe, been mistaken for inflammation of the brain, because the diseased condition of the heart and the brain unaffected. Oedema, though more commonly present in the chronic form of this disease, is still sometimes present in the acute form; it generally occurs in the lower extremities on account of the failure of the heart and the consequent venous congestion. Blood taken from the arm in Pericarditis presents the buffy coat and cupped appearance, even after copious depletion. Most frequently the

characteristic of the blood is due in a measure to the near relation existing between Pericarditis and Rheumatism. In very severe cases the disease may run its course in a few days fatally in thirty six or forty eight hours, but cases of such rapid march are extremely rare more frequently, if the disease terminates fatally recovery will take place in one two, or three weeks, in chronic Pericarditis is generally the sequel of the acute, though it may be itself the primary disease. The symptoms are a dull pain over the praecordial region extending up to the left shoulder, and in some cases it is described as simply oppression or weight; dulness on percussion, absence of the respiratory murmur, distance and feebleness of the sounds of the heart and deficiency of impulse are more constantly present than in the acute form. The friction sound is occasionally present there is a purplish or cheerly hue of the face in some instances and an anxious condition of the lower extremities. If all these symptoms the disease may continue for two or three months and not a few

or death may take place which generally occurs suddenly without any premonition of the approaching dissolution. The causes which give rise to Pericarditis are the same which give rise to inflammation in other parts of the body, the principal of which is exposure to cold and damp, when the body is warm and perspiring. It may be caused by mechanical violence, or the suppression of hemorrhage or morbid discharges by the abuse of alcoholic drinks and by the retrocession of eruptive diseases. But Pericarditis occurs more frequently as an attendant of acute Rheumatism than any other disease and probably more frequently than all others together. So closely is Rheumatism allied to Pericarditis and endocarditis that it is stated that more than two thirds of all cases of acute Rheumatism will show signs of cardiac disease. Pneumonia or Pleurisy may cause Pericarditis by the propagation of inflammation from tissue to tissue. It is often produced by Bright's disease and is undoubtedly occasioned by the morbid condition of the blood in that disease,

Of the predisposing causes, age exerts no little influence, being frequent between the ages of ten and thirty five years, it occurs more frequently in men than in females. The rheumatic or gouty diathesis is one of the great predisposing causes. The convalescence from the exanthematous diseases, and the existence of hypertrophy and dilatation of the heart are also predisposing in their nature. The disease is not likely to be confounded with Pericarditis and Endocarditis. Pleurisy, Pneumonia and Pleurodynia, is to be distinguished from Endocarditis by dulness on percussion, by the absence of the respiratory sounds, by the feebleness and distance of the sounds of the heart, and by the friction sounds of Pericarditis, and in Endocarditis there are the vocular murmurs with a total absence of them in the disease under consideration. From Pleurisy it may be recognized by a blank of cardiac dulness, which not changing with the position of the patient, by friction sounds occurring synchronous with the action of the heart, whereas the friction sounds of Pleurisy occur synchronous with the movements of respiration, hence if the patient be directed to hold his

breath, if it be the friction sound of Pleurisy it will not be heard, on the contrary if it is the friction sound of Pericarditis it will be heard as plainly as though the patient were breathing naturally. In Pneumonia — there may be dulness but there is not that prominence of the chest which is frequently present in Pericarditis. There is also absence of the friction sound and a substitution of the Crepitant rale, bronchial respiration and the peculiar viscid and rusty sputa of Pneumonia. Cardiodynia is not accompanied by any of the physical signs and some of the general symptoms are frequently absent, such as a chill followed by fever and oppression &c. The only coincident symptoms being some pain, tenderness or pressure between the ribs, and difficulty of respiration. In the majority of cases this is a mild affection and the Prognosis accordingly favorable, yielding well under treatment peculiar for any other inflammation. Simple cases of this disease rarely prove fatal, it is often complicated with Pleurisy, Pneumonia or occurs as an attendant of Bright's disease, in which case the constitution is deeply involved, consequent upon the morbid condition of the blood, that it pines and

In its simple variety it is capable of proving fatal and requires prompt and energetic treatment. The principal danger without doubt is the liability to produce other diseases of the heart which are necessarily fatal. Of the means employed to arrest the inflammation in the early stage blood letting is the most important though it should not be employed recklessly and in all cases. By means of great loss of blood the heart is unduly stimulated and any tendency to hypertrophy or dilatation is readily promoted and the object principally in view of quieting the heart is defeated. The application of this remedy should be guided by the same objects we have in view in other serous inflammations. The stimulating quality of the blood should be reduced, and a sedative effect produced. From a strong robust individual of previous unimpaired health, from twenty to twenty five ounces may be taken at the commencement of the attack repeated once or twice in the course of two or three days as the demands of the case may require. It is generally advisable after the first bleeding upon the

recurrence of the Excitement to reduce it by means of Cups applied over the region of the heart. In persons previously debilitated by disease or of an anemic condition it is usually not advisable to take blood from the arm but to rely upon the application of Cups. At the commencement of the disease the bowels should be opened by a cathartic of from twenty to fifteen grains of Calomel followed by Castor Oil or Sulphate of Magnesia, after which it will only be necessary to keep the bowels open during the disease by means of saline laxatives or Enemata. When the Excitement of the pulse has been subdued by the lancet, recourse should be had to Mercury with a view of affecting the system, it should be combined with Opium to prevent the tendency to [illegible]. It should be administered in doses of three or four grains of Calomel with half a grain of Opium every three or four hours until a Mercurial impression has been made upon the system. Intense Ptyalism should be avoided

against. When effusion has taken place it is advisable to place a blister over the precordial region and at this stage it is frequently proper to apply [illegible] which should be applied between the shoulders. That the blistered surfaces may be avoided. At this period of the disease it is often proper to use Colchicum from the known tendency of this disease to [illegible]. Digitalis may be employed being indicated both as to sedative and diuretic properties. The Colchicum and digitalis may be combined in the following proportions: [illegible] gtt xx, Liquor digitalis gtt x. If there is much nervous irritation [illegible] of the narcotics may be combined [illegible] and the combination given every four hours. Perfect rest of body [illegible] should be observed and the diet should consist of [illegible] or farinaceous liquids; [illegible] food should be avoided until [illegible] of convalescence. In [illegible] case dependent on [illegible]

it is obvious that bleeding and mercury would be contraindicated. The treatment should be tonic and stimulating cupping when the strength permits and warming are the only measures to provide for the relief of the inflammation. In cases of chronic pericarditis it is advisable to sustain a slight mercurial impression and keep blisters applied and occasionally to apply cups, and when there is great effusion diuretics should be employed, such as squill & digitalis, &c. It is advised to avoid the operation of tapping the pericardium for purulent effusion, all of the patients have been advised with a view to preventing a contraction of the coronary passages and thus producing angina pectoris.

[illegible] lymph. It is stated that [illegible] has been used with the best effect, and easily [illegible]

of the effused fluid; the operation of Paracentesis was been employed when other measures have failed, though the patients generally succumb after this operation; still it is believed there is little or no reason for supposing the operation was the cause of the fatal termination,

Feby - 1862,

Respectfully submitted,
Jame E. Bird C. Maryland

An
Inaugural Dissertation
on
Intermittent Fever:
Submitted to the Examination
of the
Provost, Regents, and Faculty of
Physic,
of the University of Maryland,
for the Degree of
Doctor of Medicine,
By
Lloyd G. Barnes
of
Maryland.

February 10, 1862.

Intermittent Fever, is a disease that resembles several other maladies that occur essentially to the nervous system & is characterized by its paroxysms recurring at stated intervals and by the absence of fever between the paroxysms.

It is [illegible] by the injective [illegible] to [illegible]. A regular [illegible] occurs, [illegible] and to a state of [illegible] & the same symptoms, will continue to [illegible] of [illegible] [illegible] attended by remedies until the patients constitution is worn out.

to the disease [illegible] quiet, [illegible] to [illegible] anemia & the depressed state of the system, consequent on the disease.

A paroxysm of intermittent fever, [illegible] cold, [illegible] stage, & the [illegible] severally marked in [illegible] to the phenomena that characterize them.

The cold, the hot, & the sweating stages.

A person, who is about to be attacked [illegible] a feeling of [illegible] sensation [illegible] & [illegible] at the epigastrium, feels languid, weak, listless & irregular [illegible] appetite, his sleep is [illegible] & [illegible] to be [illegible]

& he soon feels chilly, particular in the back, along the course of the spine, The blood recedes from the surface of the body; he grows pale. his features shrink, his skin becomes dry, rough & puckered as it were. Soon the sligh sensation of cold along the spine becomes more general; he feels quite cold & he acts like one exposed to an intense degree of cold & overcome by it. He trembles & shivers all over; his teeth chatters, the integuments of the only feel tight & constricted, his cheeks lips, ears & nails turn blue or purple. The fingers become shrunken & contracted; his respiration is

quick & anxious; his pulse frequent, sometimes slow, but always feeble He complains of pain in his head, back & limbs. All the secretions are diminished for the time; the tongue is usually dry & covered with a white fur. After this condition has lasted some time, (the duration of which is quite variable) it is succeeded by another of quite a different kind. The cold shivering sensation begins to alternate with flushes of heat, which commence about the face & neck, & in a short time extend over the whole surface The skin regains its natural colour & appearance & the collapsed & shrunken

extremities regain their natural size. Immediately the second stage is ushered in; the face becomes red, & flushed, the skin hot & dry; especially of the extremities. The temples throb violently, there is severe headache, the pulse full, strong & rapid; the breathing oppressed; with a feeling of an unsupportable weight about the heart; which causes the patient to throw himself from one side of the bed to the other for relief. The urine, which during the cold stage was pale & scanty, now becomes high coloured, After a variable length

of time another change comes over the patient, the skin recovers its natural softness, perspiration begins to appear on the forehead & in the palms of the hands; soon the whole body is bathed in a profuse perspiration, with great relief to the feelings of the patient. The thirst ceases, the tongue becomes moist, the urine more abundant, but still high coloured; the pulse returns to its natural force & frequency & the patient feels almost well, & able to go about again, though somewhat weaker, & the limbs & muscles with a feeling as if they had been violently exercised.

A distinction is made between the Intervals and Intermissions of fever. The interval, is the time intervening between the beginning of one paroxysm & the beginning of the next.

The intermission is the time that elapses from the end of one paroxysm, to the beginning the next. What is the cause then the patient suffers from the disease.

As the paroxysms are liable to vary in length; the intermissions may be very unequal; even when the intervals are the same.

There is [illegible] a [illegible] intermittent [illegible] cause exists to arrange the [illegible]

different species. If the paroxysm recurs at the same hour every day, the patient is said to have quotidian ague. When it comes on every other day, & the patient is well the intermediate day, he is said to have Tertian ague. When the paroxysm is absent two whole days, & appears on the 4th day, it is the Quartan ague.

These are the three principal species of the disease. There are also double quotidians, having two paroxysms every day. Double tertians, having a paroxysm every day of different forms, tertians. There are also

[illegible] the rule there is called a duplicate or double tertian. The third tertian has two paroxysms in one day & none on the intervening day.

The rule also is that each type has a [illegible] of its own, [illegible] respect to the time of day on which the paroxysm occurs.

There is yet another difference of the quotidian ague again in the morning; those of the tertian at noon, & those of the [illegible] morning [illegible] spread; that the paroxysm is accelerated & later each day until

then disappears to rise again. The
case is not the same with the night
to appear earlier in the day,
but it seems to retard, frequently
the latter, in proportion to the zenith.
The three principal variations appear
[illegible] in the
time of day, on which they occur
with respect to their intervals,
but also in the duration of
their proper [illegible]
The average duration [illegible] the
in particular is about [illegible]
of course [illegible] of
the [illegible] is [illegible]
The lunar paroxysms [illegible]
about [illegible] as before stated, [illegible]

11

finished the same evening; as a

[illegible]

about eight hours, & that of the

quartan, does not exceed six hours.

The tertian is by far, the most

[illegible]

[illegible]

[illegible]

[illegible]

Besides [illegible]

above; there are quintans, sextans,

[illegible]

very rare. [illegible]

[illegible]

[illegible]

[illegible]

[illegible] complete; [illegible]

some of its stages are absent, the heat
of the [illegible]
[illegible] of the cold stage, consciousness
is the reverse of this; the cold stage
is present without either
other stages, & so on for the other
complications, sometimes there is no
[illegible] stage [illegible]
[illegible] appearances, frequent & [illegible]
[illegible] chills & flashes of heat & the
pulse varies, increases & depresses.
This condition is familiar known
[illegible]
[illegible] as drum apoplexy.
[illegible] cases of [illegible]
[illegible]
[illegible] the first stage which precedes

of as the sweating stage comes on,
to the point from [illegible]
he wakes up, is quite well again.
If the duration of an attack of
[illegible]
are not often removed entirely
[illegible]
to be left without some remedy
to check the disorder, it is very
probable that if they were removed
from the aguish district, not
[illegible] by some remedial
means, but [illegible]
[illegible]

[illegible]

in superadduce disease of some of the internal organs; that would be incompatible with the longer existence of the patient, it is also liable to be fatal during any paroxysm [illegible] the extreme congestion of the [illegible] yet it is said by the inhabitants of Malarious districts, that [illegible] without any assistance of [illegible] that the [illegible] to [illegible] regular remedies.

Intermittent fever is much more

[illegible] & Autumn, than at other times of the year; hence the [illegible] & autumnal-cases.

The tertian is [illegible], generally the more severe & dangerous. The quotidian is most common in the spring; the quartan in au[illegible]; the tertian is also [illegible] persons of all ages; although [illegible] & [illegible] are [illegible] than children and age. & [illegible] difference, is that the [illegible] & [illegible] are more [illegible] in the spring

[illegible] very young, & also the reason why [illegible] [illegible]

Ans. The predisposing causes are; interior [illegible] at time; [illegible] for a great influence, Any thing that [illegible] [illegible] of the body; As very hard bodily exertion; exposure to rain & sudden [illegible] the weather; to cold, sleeping on the damp ground; Loss of sleep; a previous [illegible] [illegible] ing wet, &c, Also a previous attack of the disease, [illegible] a [illegible] [illegible] but to [illegible] the latter [illegible]

as such; but rather a predisposition
as they say the system becomes
accustomed to it, and will
[illegible] [illegible]
[illegible], [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] attacked, as those who are exposed
to it for the first time.
Certain it is that those who go
into districts where ague is rife, are
[illegible] [illegible] [illegible]
the disease; if they go there with
a strong & vigorous constitution.
& more especially, if they arrive during
the winter season, which circum-
[illegible] [illegible] [illegible]
the opinion, that length of residence
[illegible] [illegible] [illegible]

[illegible]

The exciting cause of [illegible]

([illegible]

[illegible]

poison, arising from the earth, gen-

-erated by a due proportion of heat &

[illegible], with the decomposition of vege-

-table matter. Of its physical or chem-

-ical qualities, we know [illegible]

-ing; we are made aware of its exist-

-ence, [illegible] its [illegible]

[illegible]

[illegible]

the last Century & a half, it is true,

that [illegible]

in certain districts had been suffering

from its noxious effects. The Italian physician Lancisi was the first to [illegible] concerning this poison, in his work, published at Rome the year of seventeen hundred & ninetyfive; which is the great original work on the [illegible]. It [illegible] requires a considerable amount of heat for its production, as it is very seldom traceable above fifty-six degrees north latitude. It is supposed to require a continuation of temperature above sixty degrees of Fahrenheit [illegible] time to generate the miasm.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] & congestive forms,

It appears to be [illegible] [illegible] death after heavy rains, when the land has been flooded with water

[illegible] that the [illegible]

[illegible] the weather is accurate [illegible]

"While the air contains [illegible] [illegible] is not produced; but where the land is [illegible] [illegible] [illegible] it is never occasioned [illegible].

[illegible] gravity, thus the inhabitants [illegible]

[illegible]

[illegible] traces of a building.

It also seems to be wafted about by the winds. A piece of woods, even quite a narrow strip of trees, intervening between the Malarious district & the dwellings of the inhabitants exempt them in a great measure from its action. [illegible] to detect the nature of this pestilential [illegible] [illegible] the [illegible] of [illegible] districts. The poisonous principal eludes the test of the most delicate [illegible]

"Where there is much heat & humidity [illegible] [illegible] that the decomposition of

vegetable matter, was one of the essential causes of Malaria; but the investigations seem to prove that decomposition of vegetable matter may be carried to the greatest extent without producing Malaria. It is not in the fertile lands & alluvial of all large cities where no malaria is produced; whereas it is stated that on the level & sandy plains of Texas & in some of the Eastern states, where no vegetation exists, that the intermittents & remittents appear in the greatest extent.

Dr Watson says, "For producing Malaria it appears to be requisite that there should be a surface capable of absorbing

moisture & that this surface should be flooded & soaked with water & then dried, & the higher the temperature & pressure of this process, the more plentifull, & the more virulent (more virulent probably because more pestiferous) is the poison that is evolved?

It is ascertained from observation that malarious districts are much more dangerous at night than in the day time, when the poison is more abundantly evolved at that time, as a consequence of the diminished temperature of the atmosphere, or whether the body is more susceptible to the poison at

that [illegible] is [illegible]
active [illegible] the night; I [illegible] [illegible]
that the [illegible] [illegible] [illegible]
that is assumed during the night
has something to do with it; as
the hazard is [illegible] [illegible]
-tion towards the earth,
Fogs break the [illegible] [illegible]
[illegible], it was [illegible] [illegible];
also a stream of water of an
[illegible] [illegible], [illegible] [illegible]
to [illegible] the same [illegible]
Persons on their [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
those of the ship's crew, who hap-
-pen to remain on land during the
night, contract the disease.

It is also capable of being wafted about by the winds from the place where it was generated to some healthy & elevated place, & knowledge of this fact is of important to persons in the location of dwelling or towns, or the location of a camp for dwelling operations, where the wind blows for a considerable time during the year in the direction of a malarious district. It is also believed that the malaria can be absorbed by the water over which it has accumulated, & thus be introduced into the system of man & animals.

It is found from experience, that a country becomes less subject to malarious influence in proportion as it is cultivated & drained of its marshes; & also in proportion as it is depopulated. Does it become infected with the miasma.

There has prevailed an opinion from the time of Hippocrates that some vegetable [illegible]

it is probable that this ~~this~~ motion arose from the fact of the difficulty of [illegible] to conduct their practice, & [illegible] the profession.

[illegible]

affected with ~~with~~ it for a certain length of time, So far from being considered healthy at the present day it is considered a [illegible] to the most fertile portions of our globe. The inhabitants of Kalarian districts are generally small in stature & their complexion sallow; they are prematurely old & their [illegible] & aged aspect; the spirits & intellects of the inhabitants are generally [illegible] & feeble.

The [illegible] of the [illegible] is generally favorable to the spirits & intellect generally with [illegible]

[illegible]

but with the [illegible] begin [illegible]

he were the subject beforehand of

[illegible] the attack of

intermittent fever may destroy him.

In warm countries women are much

[illegible]

[illegible] They are often accompanied

by most severe affections of the head.

Fainting, [illegible]

[illegible]

[illegible]

their strength. And as before

the attacks

[illegible]

[illegible]

fever.

The treatment [illegible]

may be divided into two parts;
That which is necessary during the
paroxysm, & that of the intermission.
In the temperate climates very little
is necessary during the paroxysm;
but in hot countries, where the die-
ease is liable to run into an a-
typical or congestive form, the
treatment, is all important from
the danger which may arise from
congestion of internal organs.
Though the cold stage diluent drinks
are proper, consisting of teas, water,
weak tea, gruel &c. to be taken warm.
For patients, who are very feeble or
exhausted, wine when, or some other
gentle cordial may be added.

External warmth is also [illegible] tial, the patient should be put to bed & wrapped up snugly, & hot bags of hot salt or bran applied to his epigastrium, & warm bricks applied to his feet. Irritation & stimulating liniments applied to the spine may be of use. Opium is said to have a powerfull effect in [illegible] the vomiting during the cold stage in intermittent fever, [illegible] indications of a loaded or oppressed state of the stomach, Ipecac is the emetic generally preferred, as it produces less [illegible]

of the cerebrum, bleeding has been recommended in congestion during the cold stage, claiming to do, but without much being very effectual in cutting short the disease. But some supposed experiences have proved it to be a very dangerous thing, as it is very apt to cut short the patient's life [illegible].

When bleeding is necessary, it is during the hot stage, when there is danger of inflammation of the brain, or some other internal organ.

[illegible] during the hot stage is [illegible] beneficial.

Very little need be done in the sweating stage; if [illegible] [illegible]

[illegible] getting out of [illegible] with travels; if too scanty, it may be [illegible] by stopping warm tea, or [illegible].

Upon the whole, it is not [illegible] to [illegible] the following [illegible]

"Whenever the disorder assumes a [illegible] part of the practice is during [illegible] Purgatives [illegible] even at the outset of the treatment; [illegible] or [illegible] or [illegible] the stomach & intestines of all [illegible] or [illegible] accumulations; which

are apt to interfere with the action of the specific remedies which are now to be employed. Of these remedies, Peruvian bark or its active principle quinia is the most effectual, there are a great many other medicines which have been [illegible] employed, with various degrees of success. The discovery of Peruvian bark was a great acquisition to the Materia Medica; it was some time before it could be brought into general use as it met with great opposition from some of the most eminent men of the profession. To [illegible] is due, for his exertions & exertions in bringing it into general use. The sulphate of quinia is the form in

which it is most usually administered at this day. The bark is apt to disagree with the stomach from the great bulk which is required to produce the necessary effect; but in some rare cases where the sulphate has not had the desired effect the bark has proved effectual. The best plan is to administer it by giving [illegible] every two hours, untill from twelve to fifteen grs are given during the intermission. The most [illegible] elegant way to administer the sulphate is to dissolve it in water, with a sufficient quantity of sulphuric acid to ensure its solution, & may then be given in full or fractions.

It has been a question among writers whether quinine should be given [illegible] and [illegible] in the [illegible] of the [illegible] to the [illegible] period [illegible] the [illegible] of the paroxysm, the cases where the [illegible] [illegible] to any [illegible] it [illegible] advisable to administer the whole [illegible] [illegible] [illegible] [illegible] [illegible] one dose; but where the [illegible] is of considerable length, as in the more forms of intermittent; it seems best that it should be [illegible] [illegible] into the system, in divided doses;

[illegible] [illegible] [illegible] [illegible] [

much larger doses are required to break up the [illegible] than in [illegible]. [illegible] different [illegible] to [illegible] the desired effect, which may be known by a peculiar [illegible] of the [illegible] & hearing of the ear.

"When this effect is produced, the remedy should be pushed no further. [illegible] to give the bark, only during the [illegible]

there is danger of death occurring during the paroxysm. There is [illegible] a difficulty in administering the drug owing to irritability of the stomach, which can be obviated by introducing it per rectum. The menstruum in which it is dissolved, should be small; least it too might be rejected.

From the experience of Dr. Condie it can be administered, [illegible] with good success. From four to ten gr. being sprinkled upon a [illegible] [illegible] [illegible]. When the paroxysms are [illegible] should not be discontinued at once, as they are very apt to return on the

seventh, fourteenth & twenty first days from the date of their usual occurrence; but the patient should continue to take from two to four oz. of wine every day for two or three weeks, or as some say until the time at which the catamenia occur, & then just before the expected time administer it in a sufficient quantity, to bring the system under its influence at once.

From the very high price of wine, it has induced persons to try the other inferior fermented liquors with a view of obtaining some in a cheap form, & yet possessed of the virtues for the purposes of these Cinchoniane, quinodine & quinidine appear.

to be the most important.

The sulphate of Cinchonia at the pres-
-ent time [illegible]
employed extensively, from its known
efficacy & [illegible].

Arsenic is another medicine which
stands high in the profession as an
antiperiodic from its known efficacy,
cheapness & want of taste.

It is well adapted to cases of children
& for the poor, who are not able to
pay the high price of quinine.

And also when there is [illegible]
[illegible]
[illegible]
[illegible]
[illegible]

the best form to administer it in:
ten or twelve drops, two or three times
a day, is usually sufficient for most cases,
but it is best not to commence with
more than [illegible] quantity. Debility of
the system, [illegible] the [illegible] head-
ache & irritability of the stomach, with
a silvery whiteness of the tongue,
are the signs of its action on the system.
These effects can be in a great
measure prevented by adding a few
drops of laudanum to each dose,
or by taking the extract of the inner
Willow bark or its active principle,
[illegible] is the best [illegible] of
the [illegible] of [illegible]
[illegible]

tioned, Jesuit's bark, black pepper, preparation of iron & of lime, have all been tried, with various degrees of success. But upon the whole sulphate of quinine is found to be superior to them all; and where it can be procured it should be frequently

Of the prophylaxis of this disease nothing more is said, the essential point, is to remove the individual from the exciting cause of the disease, but this can only be done by [illegible]

Therefore some precaution should be taken by the person, to ward off the attack. He should avoid [illegible] exposure, & fatigue at all times; he should avoid exposure to cold &

wet & the extreme heat of the sun;
[illegible] should be [illegible] out early in the morning while the dew is yet on the grass, & also avoid remaining out [illegible] the
[illegible] tendency of the [illegible] to gravitate to the earth at this time, & he should rather sleep in the upper stories of the house. Even the lower rooms he should if compelled to go out early in the morning without [illegible] [illegible] thing to eat, be some spirits. Persons who have lately been recovered from intermittent fevers would do well to take a few grains of quinine daily as a safeguard, & also those who are passing through a [illegible] country to take the same precautions.

The Rash fades as the heat of the skin diminishes. The pulse becomes slower and fuller.

Scarlatina simplex. This variety is supposed by most authors to be distinguished by the absence of the throat affection, there is only the fever and the Rash, though Dr. Meigs contends that, in all cases will be found, on careful examination, the febrile movement is sometimes very slight, if not, it may not be entirely absent. When present it will generally disappear about the fifth or sixth day. But in other cases it is much more severe. The system will become generally aggravated, high fever, great heat of

of the Skin, frequency of the pulse and occasionally delirium, except from unavoidable complications, this simple form of Scarlet fever will terminate favorably.

~~Scarlatina Anginosa Continued. Begin~~

Scarlatina Anginosa. In this form of the disease, the fever and the throat affection are much more prominent than in the simple variety, the symptoms are also more severe the headache precordial oppression, nausea, vomiting and muscular prostration are considered from the commencement. Painful deglutition with a feeling of stiffness, and dull pain in the muscles of the neck, are among the earliest

= Symptoms

The eruption is usually somewhat slower in making the appearance, than in the former variety, & comes out generally on the third day of the fever, and is less copious and diffused, appearing in irregular small flat tubercles in different parts of the body, & sometimes the eruption disappears, on the first or second day after it has come out, to return at longer or shorter intervals generally, without any cause or corresponding change in the disease, during the third and fourth days; symptoms of gastric extreme depression, the tongue is of a bright red colour; there is either diarrhea or constipation

dry cough quick and vibrating pulse and sometimes epistaxis. The accompanying inflammation advances with the progress of the disease, not more exanthematous blush, as in the simple form of the disease but a considerable quantity of viscid mucus is secreted in the fauces, which soon converts into white flakes upon the inflamed parts presenting very much the appearance of ulcers for which they were formerly mistaken but which removed they leave the surface, for the most part merely reddened, and without organic change. Though occasionally ulceration does occur, extending sometimes to the larynx and trachea, producing symptoms of

Pseudo Membranous Conformation then takes place, coagulable lymph appears on the tonsils, Yellow and Offensive discharge from the Nostrils which is very acrid, and excoriates the Orifice. Inflamation of the ears, of the mucous Membrane of the Eyes and abdomen likewise supervene, the latter giving rise to vomiting, nausea and general restlessness. If a fatal termination is to take place, the pulse grows more rapid and feeble, the breathing more difficult and the vomiting more urgent, cold clammy sweats and universal collapse speedily supervene. But in a large proportion of cases, when suppu-

and timely treatment are employed
Will gradually proceed to convalescence.
Scarlatina Maligna. In this Variety
of Scarlatina which is an exceedingly
formidable one, soon betrays its Violent
and formidable Character, symptoms
ullers prostration and depression of
of the Vital powers, sometimes commencing
from the onset, pulse feeble and irregular
face swollen and livid, lips and teeth
covered with a black fur, the tongue
becomes brown and incrusted with
dark sordes. Deglutition extremely
painful, respiration hurried the skin
variable, Eruption sometimes wanting

and always slow in making its appear=
=ance, generally from the second to the
fourth day, and is usually pale when
first making its appearance gradually
acquiring in most instances, a dark
or livid hue, in the progress of the disease.
It is also irregular in its duration
disappearing and reappearing at
longer or shorter intervals, in different
parts of the body, sometimes the patient
is stricken dead, by the poison in a few
hours, before any eruption or local symptoms
come on. The throat affection is however
is usually very prominent, though not
essential, to the malignancy of the disease.

The fever run of a deep red tint, gangrene
though rare even in the soft palate and tonsils,
then acquiring a brown or a dark colour,
then gangrenous eschars and deep ulcers
often form with considerable destruction
of the soft parts. When the slough is
cast off the ulcers and fever
ultimately recover, for the most part
the odour of the breath is fetid. In cases
of a very virulent character, collapse may
take place from the middle or end of the
second week followed by coma and death
preceded by inspiration and protrusion
of the tongue, frequent picking, albuminous
diarrhoea, sunken features, cold and

Clammy protrusions, thin inoculating
exudation which soon ends in death.
This is by far the most frequent termination
of this form of the disease, though it would
not be fair to say that cases have been found
presenting the most formidable character.
It should therefore never escape us, however
how limited indeed, are our chances of success.
Scarlatina Scarlatina is frequently
followed by Rheumatism and other dangerous
disorders, such as chronic diseases of the eyes
and ears, enlargement of the parotid glands,
inflammation of the testicle and mucous
membrane of the alimentary canal &c.
of the tonsils, suppuration of the glands

about the Neck [illegible] Throat.
Dropsy is a frequent and by far the most
serious of the sequelæ. There is no
more acute disease which is so apt to be
succeeded by chronic affection of
Scarlet fever. This affection therefore is the
Medicity of Cases, which by proper treatment
Anatomical Lesions — Inflammation
of the Mucous Membrane lining the
Alimentary Canal, Spleen are
frequently congested or inflamed, the
Blood is variously altered in diffusible
Cases, and the eruption in purplish
or livid Spots Causes: — The Cause
of Scarlatina is a Specific Contagion

and the most other skin contagions
appear to be much under the influence of the
causes atmospheric temperaments, as is manifest
from the occasional epidemic prevalence of the
different species of the tribe. [illegible]
in the various [illegible]
[illegible] Other causes [illegible]
and exciting such as poverty and its exciting
conditions, [illegible] [illegible]
[illegible] and Cold or Cold and Wet combined
[illegible]
[illegible] occasion advanced [illegible]
[illegible] for the most liable to be [illegible]
Scarlatina. Lymphosis. The disease called
Scarlatina is most liable to be confounded

[illegible] the [illegible] of the [illegible]
and unions with the [illegible] [illegible]
attended with considerable difficulty. It
may however be distinguished by the [illegible]
of the eruption, on the second day of the fever
instead of the fourth the [illegible] of the [illegible]
symptoms, and by the peculiarity of the eruption.

Prognosis. In what has been already
said, in relation to Scarlet fever, the prognosis
is given as extremely various, since the disease
[illegible] may proceed from the [illegible] to the
most fatal degree of malignity. Cases appearing
still sometimes continue or [illegible] days
under a regular and simple form, and then,
abruptly [illegible] by the [illegible] of [illegible]

The Inflammatory

Dissertation on

Tonsilitis

Submitted
to the Examination of the Trustees
Faculty and Faculty
of Physic of the
University of Maryland
for the Degree of Doctor of
Medicine

By James Sylvester Carter
Baltimore, Maryland 1862.

Scarlatina.

Scarlet fever is a disease which calls down the most careful and thoughtful study; For, whether we consider its frequency, its fatality, or the long train of evils which may often follow in its footsteps, we are alike admonished of its importance.

A disease which has so long baffled the skill and tested the experience of our profession, commanding such fearful sway, entering with an equal indifference, shifting as its peculiar victims, in the abodes of wealth or poverty, the fair and beautiful, as well as the most helpless, such a disease adjustably demands our best efforts, our most faithful Study.

That, if possible, He may [illegible] and
Wresting its mighty power forward, and laying
it, as another body at the feet of that disease
which has so often and fruitlessly been invoked
to leave them imploring the beloved
and helpless.

Scarlet fever was for a long time confounded
with measles and yet considered as almost
identical. Sydenham is said to have been
the first to allude to it, as a peculiar affection.
Nevertheless, various ancient authors in their
respective works, some have suppose, they have
found descriptions sufficiently close to designate
Scarlet fever, as the disease described.

To Dr Withering however, the credit
of having pointed out clearly the diffe-
rence between the two diseases we established
the claims of Scarlet fever to its proper rank.
This disease, may with propriety be divided
into three varieties, Viz: The Simple,
The Anginose and the Malignant
but physicians in this matter as in many
others have exercised their ingenuity
in making useless refinements in the
distinctions they have drawn between
the various forms in which the disease
may appear. It needs but a limited
experience in this disease, to see
that it is liable to many great and striking
variations.

that, while it may appear in a form so mild that the subject of it shall not be conscious of the presence of any disturbing agency, it may in the same family exhibit itself in so malignant a form as to destroy life in 15 or 20 hours. But the fact is, that though cases are not unfrequently observed in which the character of each is so well marked, yet it very often happens that they are blended together, so that it is quite impossible to determine to which disease a case belongs. In some instances it appears as a sporadic case, and then it may be very mild, in other instances it takes on the Epidemic character, and by Epidemics the fatality is sometimes very great. Yet

The disease is essentially the same in all its
variations and produced by the same cause
which is among the [illegible] disposing, remote
and its attendant contributors; impure
ventilation; damp and low situations
among the exciting causes first cold, [illegible]
and [illegible] combined. I will first speak of the
symptoms of the disease and further on give
the causes more fully. Symptoms; mode of
access. The premonitory symptoms are loss of
appetite, debility, pain in the back and loins,
heaviness, regular fever, dry skin, flushed countenance, quick
pulse, furred tongue, coryza and pains
throughout the whole system. Sometimes there are

symptoms of a severe attack, such as
Headache, vertigo, marked cerebral
convulsions &c. In the majority of cases
the access is sudden. The attacks
have manifested the constitutional power
and in a little time effect the
[illegible] [illegible] [illegible]
Endeavour in vain to [illegible] the
a sudden and prostrating blow shook
the power of the system. The patient
has gone to bed perfectly well, & perhaps
would be seen. During the night he
perish and death would be found
to have succumbed to apoplexy. The flesh
marks its appearance accordingly as the fact

[illegible] day of the first fortnight of [illegible], and [illegible] at the [illegible] [illegible]
The skin is dry and hot and dry losing entirely its natural feeling. The eruption is not ordinarily capable of being distinguished by the touch. Throughout the course of the disease, the subject of it is apt to be tormented with an intolerable itching, and the skin is often scratched on the hands and face and other parts of the body.
The Eruption usually comes first on the face, head and neck and then at [illegible] rapidly over the body and extremities, occupying 15 to 24 hours in its diffusion. It is fully in Minute spots, becoming rapidly collected

into patches of irregular shape &c.
The patch like the distribution of the
Eruption. Says Lizzen is normal on the
trunk of the body; on the limbs, face and
Neck it specially becomes confluent
and diffused. It disappears under
pressure and returns when the pressure
is removed. The colour is most intense
during the exacerbations of the fever
it also deepens in intensity about the joints
of the limbs, as in the groins, armpits and bend
of the knees and elbows. From its commencement
it attains its most vivid redness of colouring
from the first to the third or fourth day
disappearing at the expiration of three or four
days more.

If fixed iron the color be bronze
like that of a bated robber; it varies
from a light bluish, to the deepest dark
color, with its characteristic "rash" little
transparent vesicles resembling the well
known "Sudamina," occurring on the thorax
front and sides of the neck &c. A crop of
small miliary vesicles shew themselves at
different stages of the eruption. The
top is a cuticle which being gently
blanched the cuticle shrivel up into scales
and come off in a thick dust. Stage of
is a marked symptom of the disease from the
Onset much more so, than in most fevers
of the same degree of violence: It may run up to 120

140 and even 160. Dr. J. J. Mayo reports cases in children of five or six years of age as high as 165 & 170. This temperature is not an invariable sign of the convalescence. Occasionally it has considerable force. But this is not its predominant character; for in some cases, the pulse will be found but little above the Normal Standard.

Desquamation, generally commences about the fifth or sixth day of the disease, or 7th day from the eruption. The extent and duration of this, sometimes, is proportionate to the violence of the disease. In some cases it is confined to the face, in others it extends to the whole surface.

hands and sides of the [illegible] off on each of the last two days and abundant diaphoresis commenced soon after the rash disappeared.

The [illegible] desquamation of the [illegible] and legs followed the [illegible] eruption, commencing where that began and ending where that ended.

The period of desquamation was attended with a considerable amount of febrile and irritation. It was marked especially in the case of the [illegible] and hands, it is in consequence of a succession of [illegible] eruption, [illegible] little [illegible] of life.

(attended)

[illegible] an important connection betw[illegible]
this process* and the dropsy, which is so ob[illegible]
[illegible] Scarlatina. The U[illegible]
contains at some period of the disea[illegible]
albumen in great or smaller quantities
for an uncertain length of time, and when
examined with the Microscope, it is found
to contain blood, albumen, renal epithelium,
fibrious casts of the renal tubules, epithelia
and blood corpuscles. In the [illegible] stage of the disease, the urine undergo[illegible]
changes [illegible] divided [illegible]
diminished quantity, [illegible]
and [illegible] the urine
the blood [illegible]

(* process)

The Urine returns to its Normal state
and as the patient progresses towards
recovery the Urine becomes darker
Sol. that of the urine as indicated
by the Hydrometer is usually 1050
106. Specific, and occasionally has
reached 1132. The heat of perspiration
skin varies throughout the course.
The fever is not dependent upon the
appearance of the Rash, but appears
with the same degree of violence,
throughout its whole course. It is
an essential concomitant. It may
appear from the first but usually
disappears the first day after the

of some cases, that Diarrhea sets in,
Irritability of the Stomach in some
Epidemics [illegible] more frequent
than in others, Vomiting is sometimes
among the earliest symptoms, and pre-
cursor, ordinarily but not one, it has
difficult to give Medicine a Necessity
for anything to remain in the Stomach
is lost, The effects of the Disease
further appear with the progress
of the disease. In the first stage [illegible]
the pain, spasms, and [illegible] of figurative
action, the Mucous membranes
are added, the tonsils are enlarged,
the lymphatic glands are enlarged and tender.

In mild cases, the throat affection may proceed no farther, but if it becomes the most prominent and distressing symptom, the disease has developed its most fearful feature, attended with difficulty within and without, painful deglutition and occasionally impeded respiration. False Membranes are sometimes, sometimes there not, usually on the second day, though it may be later, on the ninth tenth or eleventh, & is found first in patches on the palate or tonsils or both, and, it may extend, even to the whole of the larynx, in fatal cases all the symptoms begin to decline from the 6th to the 9th day.

and the patient suddenly dies from visceral derangement when he was apparently free from danger. While on the other hand, occasionally the most formidable character determined in recovery. The Angineuse variety of the disease can never be looked upon as free from danger, and the Malignant form is ranked among the most fatal Maladies. The character of the epidemic should be borne in mind in giving an opinion as to the result. When it is very Mild, we may with some certainty predict a favorable issue, under apparently favorable circumstances, and Vice Versa.

Treatment. In the simple form of the disease Nothing but the Mildest antiphlogistic -

Plan of treatment is necessary an Emetic at the onset and mild aperients if the bowels are constipated. Rest in a space diet cooling acidulous drinks and when the surface of the body is very hot cold sponging are the means principally to be relied on. In mild cases of Scarlatina Anginosa treatment the same as in the simple variety will generally be sufficient. In the more severe forms of the Anginose 2nd the Malignant variety a much more energetic course of treatment is requisite. First moderate arterial excitement. 2nd Unless local congestion and inflammation 3rd Support the powers of life. Almost all writers recommend an Emetic at the onset of the disease, which

should be repeated if necessary. Mild Cathartics throughout the disease, such as Castor Oil, Rhubarb, Magnesia, or Calomel, demulcents useful, given after an Emetic, Cold to the surface by sponging, refrigerants internally, as Ice, water or small pieces of Ice, held in the mouth is preferable. The Lancet is occasionally, though very seldom useful, indications for its employment are a full and bounding pulse, with a tendency to Coma, it should never be repeated. Topical Bloodletting by means of Cups or leeches applied to the temples or behind the Ears are highly beneficial. When the fever is at a very high pitch, the Nitrous Mixture may be taken, in small doses, every hour or two, during the

Lay. A solution of Acetate Citrate or Muriate of Ammonia. The internal and external use of Chlorine throughout the disease is highly recommended by some physicians. Paregoric, Hoffman's Anodyne, Digitalis and Sweet Spirits of Nitre are very useful in subduing the various symptoms for which they are indicated. The Throat always require great attention.

A gargle containing 1 drachm of Chloride of Zinc to the ounce of distilled water, three or four times daily is very useful. An infusion of the cures of red pepper in one pint of boiling water is a very good gargle. A mixture of hydrochloric acid and honey applied to the inside of the throat by means of a camel's hair pencil is recommended.

By Mr. Samuel Chew of Baltimore

To remove the Odor from the throat, sulphat. of Zinc or Nitrate of Silver or Creosote gargle are very useful. In the latter stage, Stimulants and tonics are the means principally to be relied on. Carbonate of Ammonia Brandy, Wine, Whey, Cinchona are the most suitable.

Prophylactic Measures. [illegible] Belladonna has been highly recommended, though experience has not decided in its favour as possessing such virtue. Necessary [illegible] in relation to the efficacy of this [illegible]. We are not without respectable authorities.

In favor of the prophylactic powers of this article, when given in small doses. Frequent changes of the linen, free Ventilation, Seclusion of the sick and other similar precautions have been found completely effectual in preventing the communication of the disease, to other members of the family.

A

Clinical Report on Cases

Submitted to the Examination
of the
Provost Regents & Faculty of
Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
John A. Grover
of
Maryland
of
Member of the Class of 1854 & 55

Case 1

Subacute Orchitis

Edward McGrath was admitted into the Baltimore Infirmary April 11th 1861. Age sixty five years. Occupation Store Keeper.

He has always enjoyed good health until two or three weeks before being admitted; when he began to notice some slight swelling and pain in the testicle. On the day of his admission he was examined by the visiting Surgeon, who discovered the testicle very much swollen, hard and considerable pain on pressure. No direct cause could be assigned for the disease; as he had no recollection of ever having any venereal disease or of ever receiving any external blow or injury, which was likely to produce the disease.

The following treatment was instituted in his case. 1st. A mild aperient was at first administered, after which he was put upon the bichloride of Mercury gr 1/16 three times daily. A suspensory bandage was used to support the scrotum, and the Tinct of Iodine was applied externally to it.
April 12th. It was thought advisable to administer the Iodide of Potassium in connection with the mercury.

℞ Potassae Iodidi grs v
To be given three times daily.
This treatment was continued without any change in the disease until April 26th when he began to show some signs of improvement. On the same day the Tinct of Iodine was discontinued it being too severe

and producing slight vesication.
Iodine and Glycerine was substi-
-tuted in its place:
April 28th. The Iodide of Potassium
was stopped and the Bichloride
continued until cured, without
producing the slightest symp-
-toms of Ptyalism.
He was finally discharged
May 3rd. as being entirely
Cured.

Case 2

Gunshot Wound in the Abdomen.

William Reed. Native of Virginia. Age seventeen Years. Occupation sailor. Admitted into the Infirmary April 20th 1861. He was wounded in the riot on Pratt street April 19th. by a minie ball.

The position of the wound was about one inch above Poupart's ligament, two inches from the crest of the Ileum, and about two from the navel. The ball penetrated the abdomen and passed out through the Glutei muscles. When he was brought in he complained of slight pain and soreness, followed by rigors with slight fever but no very marked symptoms

of peritonitis was evident.
Dr Hammond after examining the case and the nature of the wound instituted the following treat-ment viz.
℞ Pulv Opii grs ij Given every two hours. A warm poultice to the abdomen, and cold water dress-ings to the wounds. This treatment was continued until April 23rd there still being no symptoms of peritonitis; the Opium was lessen-ed to one grain every two hours.
April 24 the The Opium was reduced to half grain
April 25th He lost control over his bladder and his water had to be drawn off. The Opium and poultice were discontinued; but the wound still dressed with cold water dressings
April 26 the The patient improv-

-ing, and having had no evacua
-tion from the bowels since he
was wounded; an injection was
given which had the desired effect
of producing one.
April 29th Pilv l pii grs j at
bedtime in order to procure sleep
he passed a very pleasant night.
April 30th He again acquired
control over his bladder and
passed his water with ease and
comfort, and the wounds begin
-ning to suppurate
May 4th The wounds still con
-tinuing to suppurate was or-
dered to be dressed with patent
lint and simple cerate.
13th. A piece of bone was discher
ged through the posterior wound
19th. The wounds look healthier
25th. Both wounds were touched
with the Cupri Sulphas. -

May 30th The wounds continuing to improve The Cupri Sulphad was again applied

June 5th The posterior wound looking much better than the anterior. — Considerable quantity of pus was discharged through the anterior opening

June 16 the The wound are in a healing Condition and have discharged several pieces of bone through the anterior one. He can use his right leg with much more ease than formerly and complaines of very little soreness

June 25th The patient is beginning to walk and is nearly well.

June 30th He discharged a piece of bone through the posterior wound.

July 4th He was discharged as Cured.

Case 3.

Typhoid Fever

Rodger Mc Gorley. Age twenty nine Years. Native of Baltimore Occupation Coachman Admitted into the Infirmary May 10th 1861.

He has always enjoyed very good health until the time of his admission into the Infirmary. He went to Havre de Grace and remained there sometime while there he was very much exposed and became very wet. Two or three days afterwards he was suffering with a cold and thought he had a chill, which was followed by a fever and it continued to increase.

When he was examined by the visiting professor he complained of severe pains in all his limbs also great pain between the shoul

-ders, and suffering with bronchial affection for which cupping was ordered to be applied between the shoulders and down the sides of the spinal column, which seemed in a great measure to relieve the pain. His bowels had not been moved more than twice for the space of two or three days.

℞ Magnesiae sulphas. was given at once, it acted several times.

May 11th ℞ Potash Bicarb ʒij
Aquae f ℥vj
A tablespoonful to be given every three hours. Dovers powder grx at bed-time

12th The fever still increasing the pulse 98. The tongue much furred.

13th He appeared to have slight dullness of intellect and at times disposed to wander in mind.

May 14th The same symptoms continuing. 15th. On more minute examination of the case; the fever seemed to be much higher, and slight gurgling was discovered in the region of the Ileum, and the abdomen appeared to be slightly tympanitic.

May 16th. The rose spots (which are so charracteristic of Typhoid fever) began to make their appearance on the abdomen. 17th The rose spots were more numerous and more fully developed. The coating of the tongue began to change to a brownish color. The following prescription was ordered viz.

℞ Sodae Bicarb ℥ij
Potass. Chlor. ʒj
Spt. Nit. Dulce ʒj
Aquae f ℥v.

Tablespoonful every three hours.

May 18th. There was considerable irritability of the muscles, greater dullness of intellect, slight cough, and complaining very much of sore throat; for his sore throat flannel moistened in turpentine was applied until it produced slight redness, also a gargle of flax-seed tea and Alum; from which applications the patient experienced great relief.

℞ Magnesia Calc. ℥ss
Syr Rhei. f℥ij
To be given at bed-time.

19th. The medicine acted three times, the pulse over one hundred

20th Slight subsultus tendinum and more disposed to wander in his mind.

23rd. The fever on the increase, pulse over one hundred and twenty, the tongue thicker coated and a

deeper brown, also considerable pain in the head

May 24th. Considerable diarrhoea, bowels moved four times, also a return of cough. ℞ vin Ipecac gtt x every two hours, and Chalk mixture after each operation.

26th Did not sleep well at night

27th ℞ Linct Opii Camph. ℥ ʒi at bed-time, which caused him to spend a pleasant night.

28th The bowels moved only once

30th. The fever not so high and pulse considerably lessened. The complexion looking much better and cough subsiding.

June 1st The Rose spots disappearing and the patient evidently improving.

June 4th The following treatment was substituted in the place of the former ℞ ℞ Linct Scillæ Comp ℥ ʒi

To be given three times daily. The bowels not being moved for several days Oleum Ricini ℥ss was given it acted only once. 5th The patient doing well and appears much better 6th He Complains of slight deafness and weakness. Tonic Wine a wineglass ful three times a day was given. 16th The patient was permitted to sit up and Com-plained only of weakness.

June 28th He was discharged as being Cured.

Case 4

Pneumonia

John Judd is Negro man Age Twenty two years. Native of Chester-town Kent County Maryland. Occupation a Sailor. Admitted into the Infirmary May 25th 1864.

On Monday (May 20th) before being admitted, he got very wet and neglected to change his clothes. The next day he complained very much with a cold, which continued to increase until Thurs-day night, when he was seized with a chill followed by a fever.

Saturday morning when admit-ted, he had a very high fever with a hard, firm, and quick pulse He was suffering with slight bron-chitis and complained of very severe pain about the left Hypochondri-um and in the regions of the

stomach which seemed to have the appearance of Diaphragmatic Pleurisy. For which symptoms Cups was applied over the seat of pain, after which a warm poultice of hops. This mode of treatment had the desired effect of lessening the force of the pulse and relieving the pain.

℞ Massa Hydr grs iv
Pulv Rhei grs viij
Magnesiae Calc ℥ss

To be given at once as a cathartic

℞ Spt Nit. Dulce ℥ss
Sodae Bicarb ℥ij
Vin Ipecac ♏℥ij
Syrup. Simplex ♏ ℥ss
Aquae ℥iij

Table spoonful given every hour or two as the case required

May 26th. ℞ Hydr sub Mur grs ij
Pulv Ipecac gr ¼

Given every two hours.

May 27th. On more minute examination the signs of Pneumonia began to develope themselves more fully. The sputa was slightly tinged with red and the signs of fine crepitation were very manifest. The above remedies were discontinued and the following substituted.

℞ Hydr. Sub. Mur grs xvj
Pulv Opii
Pulv Ipecac a a grs ij
M. ft. Pills viij

One every three hours, and Brown mixture A tablespoonful every hour except the hour for taking the pills. May 28th. The same remedies continued, and the cough not so troublesome at night.

May 29th There was slight dullness on diseased side just below the scapular.

May 30th The bowels moved once

this morning, and some slight symp-
-toms of Ptyalism being present.
the pills were discontinued.
June 1st The patient much better-
and doing well.
June 4th He was discharged as en-
-tirely cured.

Case 5

Gunshot Wound of the Chest

James Oakley (Age 35) A private in a Pennsylvania Regiment Entered the Infirmary May 20th 1861, Laboring under a wound of the Chest received at the hands of a Companion. He was sitting on a table at the time of the accident; His Companion was standing in front of him, with a small pistol in his hand, which he levelled at him in fun. Accidently it went off. The ball entered the chest about the first rib, passed through and buried itself in the muscles of the back, where it could be distinctly felt.

"When he first entered he did not suffer much pain, except immediately around the wound. There was no pneumonia or the

-vible sounds. The breathing and pulse appeared to be rather hurried and there was no emphysema. Poultice was applied to the wound and Pulv Opii grij every three hours was given. There being no change in his condition until to-day May 24th; when he complained of severe pain and upon examination well marked symptoms of pneumonia were developed. He was then ordered the following prescription

Hydr Sub Mur. gr i
Ant et Pot Tart gr 1/12 To be taken every three hours.

℞ Magnesiae Calc ʒj
Syr Rhei. ℔ ʒij
Given at once.

The Pulv Opii was stopped during the day, and Morphiae sulphas gr 1/8 given at bed-time. The cathartic he took acted several

times. He was ordered Chalk mixture in order to prevent the too frequent operations.

May 26th. The pneumonic pains seemed to diminish, his pulse very weak. The pills were only given three times daily.

May 27th. His pulse still continuing very weak, the pills were ordered to be discontinued, and Porter was given three times daily also Quinine grs ij. May 28th. He has considerable pain in his side. Pulv Opii grj. was ordered to be given three times daily

June 4th. He continued in the same condition up to the present date, if anything seemed to be improving. The Quinine was changed to Tinct Cinchona Comp ℥ ij a half hour before each meat. the Morphia was also stopped

June 6th. The patient much better

this morning. The discharge from the wound was rather foetid in character; Laboraques solution of Soda was sprinkled over the poul-tice. This evening (June 6th about 4 O'clock) a very strange phenome-na took place. Oakley was sitting up in bed, when suddenly he com-menced to vomit large masses of coagulated blood, which evidently came from the stomach. The Cin-chona was immediately stopped, and he was given Plumbi Acetas grij Pulv Ipii gr ß. Every two hours

June 7th He vomited blood again to-day, which was more fluid in its character than the former. He was ordered ℞ Creasote gtij

Syr Tolu ℥ ß

Every three hours.

June 8th He vomited once this morning. The pills and Creasote

were discontinued and the
Tinct Ferri Chloridi gtts xx
Every three or four hours as the
case may require.
June 10th Has had no vomiting
since the 8th., but complains
very much of pain over the seat
of the ball, where it could be felt
buried in the muscles of the back.
Poultices were applied, and in
order that he might sleep at
night he was given Morphiae
Sulph gr 1/8.
June 12th He vomited to-day
whenever he took the Iron, it
was stopped and as he appear
-ed very weak, an ounce of
brandy with each meal was
ordered, also Quinine grs ij three
times daily.
June 14th He suffered very much
pain in the region where the

ball was lodged, and Dr Butter cut down upon and removed it

June 24th Nothing of much interest occured from 14th to the present date except the occasional vomiting of blood. On Yesterday he feeling better, imprudently set up before the window, and this morning he has considerable cough attended with much pain over the chest. The following prescription being ordered viz

℞ Sodae Bicarb ℥iv
Ant et Pot Tart gr j
Liq. Ammon Camp f ℥j
Saccharum ℥j
Aquae f ℥iv

M. ft Sol. Table spoonful every four hours.

June 25th He appeared to be much weaker this morning, he vomited blood once. The amount of brandy

was increased and the cough syrup stopped. June 26th he vomited several times this morning and about 3 O clock this evening after vomiting profusely it became manifest that he was dying: his death took place about 4 O clock.

At night Dr Butler held a post mortem and it was discovered that the ball had struck upon the 1st Rib, broke its sternal extremity into several ~~fin~~ pieces; separated it from its attachments to the costal cartilage and left a vacuity at this point of about an inch; being turned by the rib from its direct course it passed downwards and backwards through the lower lobe of the left lung, bruising but not passing

through the Diaphragm and lodged between the 11th and 12th ribs from which point it had been extracted.

The lung was strongly adherent to the parietes of the chest in front & behind, likewise to the Diaphragm below; being at this point in a partly gangrenous condition. The stomach was also adherent by its greater curvature to the Diaphragm and passing directly through the Diaphragm connecting both; the lung and the stomach was an ulceration at least half an inch in diameter through which blood and pus had passed from the lung into the stomach. The pericardium and heart were uninjured

Case 6

Abscess of the Liver

William Brown Age 24 Years Occupation Sailor. Entered the Infirmary Aug 5th 1861 labor-ing under Diarrhoea he was placed under treatment for this disease and in about four weeks appeared comparatively well.

He now commenced to complain of a slight pain in the side over the regions of the liver. The pain at first did not appear to be very severe, nor very deep seated. it was not much increased on pressure, and there appeared to be no constitutional disturbance whatever. The pains were regard-ed merely as neuralgic in char-acter and were treated by local anodynes and counter irritants An alterative course was also

tried. He continued in this condition for over two months, sometimes the pains would leave him for a day and then return.

He became gradually reduced in strength, and was therefore placed upon the Syrup of the Iodide of Iron and Quinine Nov 12t The pains seemed to increase in violence especially during the night. Opiates were constantly employed to allay the pains. He was gradually sinking.

Nov 16th he complained of pain over the abdomen also vomited and had some diarrhoea and on the night of the 18th he died.

The following night we held a post mortem and found the walls of a large abscess on the posterior surface of the right lobe of the liver The walls of the abscess were adherent to the Diaphragm

In the cavity of the abdomen there was a quart of sero purulent matter which gave rise no doubt to the symptoms of peritonitis, which he had before death.

On the upper surface of the same lobe was another abscess containing about four ounces of pure pus. The liver was much softer than natural, breaking down very easily on pressure. The liver was also very considerably enlarged.

An
Inaugural dissertation
On Opium
Submitted to the examination
of the
Trustees & Faculty of Physic
of the
University of Maryland
for the
Degree of Doctor of Medicine
by
Charles T. Cooke
of Maryland

1862

Gentlemen

Being called upon to submit you a dissertation upon some subject connected with Medical-Science, I have selected Opium as the subject of my remarks

Opium is the concrete juice, obtained by incisions in the unripe capsules, of the Papaver Somniferum, or Common poppy, an annual plant, growing in Asia & Egypt, where it is extensively cultivated, for the sake of the Opium which it yields. There are two varieties of the plant, viz, the white and the black both of which afford Opium; but it is chiefly procured from the former.

The juice when collected is put in

commerce. The masses and after concreting
to a proper consistence, is made up into
masses of different shape usually surrounded
with leaves to prevent their adhering
together and then sent into market.

Commerce is supplied with opium chiefly
from Hindostan, Asia Minor, and Egypt.
That consumed in the United States being
the variety produced in Asia Minor which
is introduced through the ports of Smyrna
and Constantinople, and Commerce, it is
called Turkey opium, it is usually distin-
guished into the varieties: the Smyrna
the Constantinople, the Salonica, the
Egyptian, the Egyptian, the Smyrna
variety is the one most largely consumed in

this Country: it is characterized, despite, when cut into thin, numerous minute shining lines, which resemble small seeds, and are supposed to be concretions of juice formed in the capsules after these have been injured. The best varieties of Opium are of a reddish brown colour in masses, which yield a yellowish brown powder; when diluted with water it has an intense opaque of a light brown colour. It odor is strong narcotic; its taste is bitter, nauseous, somewhat acrid; its solution reddens a brown liquid

Opium contains Morphia, Narcotina, Codeia, Thebaina, Papaverina, Narceina; also alkaline properties, by Narcotin, Pseudo

morphia; an acid denominated meconic
& an odorous principle. Of these constituents
of Opium, Morphia is the only one which
has been used in medicine.
Opium is primarily, moderately stimulant
to the part to which it is applied & the
circulation, including the blood vessels
system, especially to the brain; secon-
darily it acts with other narcotics, & uni-
versality as an apparent sedative.
From a full dose of Opium no other or
immediate effects is experienced to
a feeling of stupor & warmth in perhaps
a slight in the stomach; after a time
burning, accompanied by a sense of
fullness has been taken, a vertigo
takes place & the head is affected, which

in a short time is followed by a sensation of ease & comfort with an elevation of the moral & intellectual faculties, which last is one of its most characteristic effects. There is, not the uncontrollable excitement as results from the use of Alcohol, but an exaltation of the mental faculties, a disposition to do greater & nobler things & a peculiar self reliance, & consciousness of power; along with this emotional & intellectual elevation, there is also a greater disposition to act; & the power of enduring labor & fatigue is greatly augmented. & the quantity taken be most insufficient to produce sleep, these sensations may continue for hours, and enable the person to undergo an amount of labor

a bodily exertion, or which he is utterly incapable in his ordinary Condition; there may be at the same time with the above phenomena, a buzzing or ringing in the ears; this however is generally so slight that it is not noticed unless the attention is particularly directed to it. After a time varying according to the amount taken the patient falls into a sound sleep, upon awaking from which he experiences a sense of depression, indicated by languor, restlessness &c; there is a feeble pulse, a disordered stomach & sometimes vomiting; these which may over gradually wear off & the system returns to its ordinary Condition, without having suffered any appreciable injury. It was before stated that

influence of Opium on the Circulation is strikingly Contrast: the pulse is direct[illegible] pulsations will be increased; that action was taken the Circulation of pulse from the respiration becomes considerably slower than it naturally is. When the Sleep is profound, is the Stertorous. The blood during the Stage of excitement retains its florid Color but becomes dark when the influence of Respiration upon it is diminished on account of the depressed State of the Lungs, it becomes of a bluish hue; the pulse is strikingly depressed, when a large poisonous dose of Opium has been taken. Opium diminishes the heat of the extremities; the mucous secretion of the au-

-intestinal canal is diminished, and the
wall dryness of these parts, by thirst, the
of the secretions of the pancreas are
considerably diminished. The secretion
tion of the liver is much impaired. The
secretion of opium is shewn by the
bile of dogs; the urinary secre-
-tion is greatly increased. Generally their
secretion is diminished, especially if the
patient is covered up warmly in bed.
The bowels are generally constipated, owing
partly to deficient secretion of bile & pan-
-creatic liquor, but probably in a greater
degree to a deficiency of peristaltic motion
on account of which the muscular coat
of the stomach becomes, as it were, paralyz-
-ed. The process of nutrition resists
the

are much diminished by the use of Opium.
yet Mania is not resulted, owing to the
fact that tissue disintegration is also
diminished in an equal degree with
nutrition. There is a great diversity in
the susceptibility of different persons to
the influence of Opium. In some it
induces a species of intoxication resembling
that resulting from a cholagogue
thus delirious & producing convulsions
this peculiarity has been noticed
in the Turkish Opium eaters. In Chinese it
produces headache, but upon subsequent
taking it produces in others sleep it produces
coma & sometimes death, as a last resort
then a. as in idiocy, & then the
lake the medium dose for will be.

nausea & vomiting & sometimes with spasm of the stomach, or fit. Though the exp[illegible] its normal effects, it can not be followed with subsequent nausea & distress, so as to preclude the use of the medicine in that case, [illegible] but is [illegible] some of these effects of Opium are [illegible] constituents of the drug, [illegible] under any circumstances, [illegible] inconvenience. It is certain that some of them may be [illegible] by particular modes of preparing the Opium for use. Consistency, either in separating from it the [illegible] matter, or [illegible] the State with certain principles

When a poisonous dose of Opium has been taken, it must be as a [illegible]; as it can cannot be [illegible] at [illegible] of it

only reaches the brain through the medium of the circulation & stimulating that organ; which stimulation is augmented as larger quantities of the wa[illegible] in contact with the brain until it produces an amount of congestion inconsistent with the functions that organ [illegible] & death [illegible] improves the patient becomes apparently [illegible] [illegible] than other [illegible] than that of asphyxiation, which is not unfrequently [illegible] [illegible] After a time the consciousness becomes [illegible] [illegible], with a [illegible] expression; the eyes are closed the pupils contracted; & the pulse [illegible] well. The coma however is not complete for several hours, & the patient is capable of

being roused & kept for a time partially a-
-wake by being half dragged around the room;
but after a few hours the coma becomes so
profound that the patient can no longer
be roused from his condition; the com-
-tenance becomes pale; the skin cooler & more
relaxed; the pulse & breathing become much
slower, a considerable interval elapsing be-
-tween the successive respirations; at length
after prostration ensues, the pulse ceases to be
perceptible at the wrist; there is a cold
clammy sweat over the surface; the res-
-piration at last ceases & death apparent-
-ly takes place: the heart however still
continues to act feebly & a short period
still intervenes for the cessation of the
-tration, but in the case becomes so

being

hopeless. Death by a Opium, which may
prove fatal varies so much with Constitutional
peculiarity that it is quite impossible even
to approximate the fatal dose in any par-
ticular individual. Q. (Question), in-
stances are authenticated cases in which
death resulted in a ~~adult~~ man from
1½ grs of Opium combined with 6 grs
of Camphor. The inference to be drawn
from such facts is that great caution
should be exercised in exceeding the ~~the~~
full dose which ~~dose~~ experience has shown
to be safe
The morbid appearances after death by
Opium are, Congestion of the brain, with
more or less serious effusion; congestion of
the lungs; a bright hued the stomach

Saturated state of the blood. As there is no antidote to opium which can be relied on the treatment of poisoning by the drug consists in evacuating the stomach & supporting the strength through the stage of prostration which is the consequence of the direct influence of the poison.

The first indication is to be met by emetics & the stomach pump: emetics can however be chiefly relied on, when solid opium has been taken, as there may be lumps too large to pass through the tube of the pump. The emetics of most value are sulphate of zinc & ipecacuanha: the former is very prompt & energetic, & safer in large doses than sulphate of copper because less corrosive

. of than tartar emetic, because less irri-
-tative & frustrating in its influence.
Thirty grs of sulphate of zinc, & 1 drachm
of ipecac, may be given at once & re-
peated till they operate. The emetic, how-
-ever, should be aided by large draughts
of warm water, or warm chamomile tea.
The throat may also be tickled with a
feather, in order to rouse the stomach
by its sympathies: but the great difficul-
-ty in producing vomiting is the insuscep-
-tibility of the cerebral centres, namely
they are incapacitated to transmit the
requisite influence to the stomach, as it
is through them that emetics act.
It is important therefore to rouse these
centres & render them more susceptible

the nauseating impression sent to them from the stomach; to effect this cold water should be dashed on the head, face or chest, if the pulse is full & strong blood must be taken from the arm in order in some degree, to lessen the pressure upon the brain. If, after the evacuation of the stomach, extreme prostration should ensue it must be combated by stimulating medicines; as wine, whey, ammonia &c. If the patient when first seen is in a state of collapse no time should be lost in attempting to evacuate the stomach, but care should be had immediately to the stimulating & supporting plan, as it is not the direct influence of opium we have to oppose here but

the death-pain following that of drowning.
In extreme cases of this kind recourse must
be had to Artificial respiration, for although
the pulse may not be perceptible at the
wrist, yet the heart may be still act-
-ing, & by inducing the necessary change
in the blood by artificial respiration, the
life of the patient may be saved: a
remedy which may be resorted to un-
-der similar circumstances in galvanism
or the current of the Electro Magnetic
Machine. Ether has been employed to
qualify the effects of Chloroform
but has been in the experience of an
tidote, than any other agent: it is always
necessary to be [illegible] Chloroform
in finishing, [illegible]

[illegible] food, [illegible] on the
[illegible] in a [illegible]
[illegible] of [illegible] the pecu-
-liar intoxicating effect on the habit
of using it constantly with large quan-
-tities [illegible], [illegible] dyspepsia
and [illegible] [illegible], [illegible] large
[illegible] [illegible] [illegible], a [illegible] of in-
-capacity [illegible] for [illegible] [illegible]
[illegible] with [illegible] [illegible]
on the organic functions, as impaired
appetite, [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] the liver; together
with perversions of the [illegible] [illegible]
[illegible] [illegible], [illegible] [illegible]
interest in the home, [illegible] life,
social relations &c. The effects of Chum

[illegible] Opium Smoking [illegible]
[illegible] of the Opium [illegible] been [illegible]
described. Dr. Cyprian gives the [illegible]
in Canton, & what he has [illegible]
[illegible] in Our last Tract [illegible] Dr.
The Opium Cater usually commences
with from pills 20 or, Gradually increases
to 2 drachms a day, [illegible]
[illegible] by his appetite [illegible]
[illegible] a bag, [illegible]
[illegible] & the Pipe frequently to such an
[illegible] a Crown. [illegible]
[illegible] day. [illegible]
at first [illegible] [illegible]
[illegible] in the highest degree [illegible]
[illegible] Dr. [illegible]

[illegible]

hardly one evacuation in a week; his
mental & bodily powers are [illegible];
[illegible], he is [illegible]. [illegible] the
[illegible] of the prison, at length [illegible]
[illegible], he [illegible] with it [illegible]
[illegible], gradually increasing, the last
[illegible] it [illegible] to [illegible] days. He finally
becomes subject to neuralgic pains [illegible]
[illegible] of the [illegible], [illegible]
[illegible] the use of the [illegible] in [illegible]
does allow the use of [illegible]
[illegible] as respects the
[illegible] that his [illegible] hair may be [illegible]
[illegible] [illegible] [illegible] the
patient is in earnest as the disease
[illegible] perpetual, [illegible]
health may be allowed. [illegible]

it is necessary to gradually lessen the a-
mount of Opium taken daily, so that the
System may not feel the loss of the usual
Stimulant; it would not do to break
off suddenly, as no fortitude would be sufficient to support the consequent misery
& life might be sacrificed in the effort

Opium acts simply by an in-
fluence upon the vital properties of the
tissues without any chemical agency
whatever; that it is a powerful poison is proved
by the fact that in numerous cases of
fatal poisoning, round it is stated in the
Stomach after death, even when there
have been vomiting; by the smoked
Opium having been found in the bodies
of those who have taken large quantities

— Opium

also by having been observed in the blood;
moreover, the milk of nurses under its in-
fluence has produced its peculiar effects
upon the system of infants.
From its slightly stimulant effect on the
surface with which it is generally brought
in contact, it may be supposed to exercise
a similar influence wherever it is carried
by the circulation, thus producing the
moderate excitement of the heart which
is observable during its primary or stim-
ulant operation. The influence of Opium
on the nervous centres is essentially seda-
tive; the primary mental excitement
may be thus readily accounted for, as well
as the more rapid respiration & increased
muscular power, & it is not improbable

that the stimulation of the heart may proceed from the same cause, viz. from the medical contact of the drug or its active principle. The impaired sensibility, & tone of the heart & arteries are explained upon the general doctrine of irritation. Irritation is stimulation carried beyond the healthy point; when then a part is stimulated it receives an additional supply of blood, & the supply increases until the stimulation ends in inflammation. Thus we see that the effect of stimulation upon any part, is first to accumulate, then to change, & lastly to impair its functions. All this long after the direct influence of the stimulant is lost upon this, is the action of opium

on the Nervous Centres; it first mediately stimulates & Concusts them thus increasing their functions, & giving rise to the exalted intellectual, emotional, & Sensorial phenomena, & perhaps to the Circulatory & respiratory excitement, which attend its primary operation. By the quantity of Opium in large the Congestion is hastened & increased by the more powerful & prompt Stimulation: hence the speedy occurrence of profound Sleep or Coma

The Condition which follows the use of Opium, is in accordance with the other pathological laws, by that an excitement is followed by a corresponding depression; the Cerebral Centres no longer stimulated necessarily fall into a

depressed state, no more blood is sent to them, they have not lost the power of expelling the excess which has overwhelmed them; hence a failure of all the dependent functions of the universal prostration that ensues.

Opium has been known & probably used from the earliest periods of Grecian history. It ranks among the most important medicines, & in the variety of its applications & extent of its employment, stands at the head of the catalogue. It exhibits numerous indications in the treatment of diseases. It is a most important remedy in affections in which the nervous system is depressed & the vital powers enfeebled as in low fevers & fluxes.

Another important property of Opium and

power of relieving pain, & if it possessed no other merit than of itself would render it a most valuable article of the Materia Medica; it does this probably by benumbing the Central Centres, thus rendering them incapable of receiving irritant impressions from other parts of the body: it is of great value in this respect in the treatment of painful local affections, as, Cancer, Neuralgia, painful Spasms &c.

Owing to the property it possesses, when given in small doses of acting powerfully as the Nervous Stimulants, it becomes a most invaluable remedy in those diseases in which the latter articles are indicated: some of these are, general or local uneasiness, distress,

wakefulness, slight pains, spasms, nausea, &c.

For the production of sleep Opium is the most important agent. It produces this effect by congesting the cerebral centres, rendering them unfit to perform their functions, which are for a time nearly or quite suspended.

The dose of Opium varies, extremely with the purpose to be fulfilled, the idiosyncrasies, habits of the patient, the modification of susceptibility produced by the disease.

For a slight anodyne or soporific effect, the dose is 1 grain; more than 3 grains should never be given to an individual whose peculiar susceptibilities are unknown to the prescriber.

For the pure stimulant influence in persons unaccustomed to its use the dose is from 1/8 to 1/4 grain: as a nervous stimulant the dose is from 1/12 to 1/4 grain. In diseases in which the centres are extremely depressed, as in delirium tremens, the dose may be greatly augmented, & sometimes almost indefinitely.

The contraindications to the use of opium are, a high state of febrile excitement, accompanied by a full strong pulse; determination of blood to the head, threatening apoplexy; by hemorrhage within the cranium; by acute inflammations of the brain & all acute inflammatory affections accompanied by

full strong pulse before sufficient pre-
liminary reduction has been instituted
Also acute inflammations of the mu-
cous membrane, especially
of the bronchial tubes before secretion
has taken place.
Excessive sweating, Constipation of
the bowels, a feeble digestion & want
of appetite & a defective biliary se-
cretion, are all times a bar in op-
position to the use of Opium.

An Inaugural Dissertation On Alcohol

Submitted to the Examination of the Provost, Trustees & Faculty of Physic of The University of Maryland for the Degree of Doctor of Medicine.

By Wilton Ennis of Maryland

1862.

In entering upon the consideration of this important fact, it must be remembered, I enter upon a topic well worthy the consideration of the wise and [illegible] of the more, and that I am a mere novice in the broad and [illegible] field of the human [illegible] and the positive science which I have chosen for the business of my life.

It would be attended with natural wise, to attempt a lecture upon the great and [illegible] science or upon the [illegible] of any part of that science without great diffidence as to my abilities to do it justice. [illegible]

the boundless fields of truth lie open
to the mind of an Newton, that
to the mind of a pin-wire lie to be
amid the arcana of science. Many
just is only entering upon the surf-
waters of that great ocean which, though
many great in wisdom and experience
have sailed over from earliest ages
to the going down of the sun of life
and made many delightful and fine
time voyages, yet have never reached
Hence in the shoal waters there is
a room to understand more important
will necessarily exist. But practical
must not be expected to be perfect
It is a [illegible]
[illegible]

I embark upon the task before me; and trusting to the force the endurance and the [illegible] which I have gone before me I hope to triumph over whatever dangers that may be concealed in the unknown world and once more unfurled our sails into paper bound.

(A certain Gen[illegible] general was wont always [illegible] to attribute his victories chiefly to the circumstance that he [illegible] the enemies he began the contest without a misgiving. In the [illegible] I propose to follow the [illegible] of the general and proceed at once to the consideration of my subject with

further preliminaries —

It has long since been settled by philosophers that nothing can be taken away from and nothing added to the material world since the first dawning of creation. Therefore it is evident that alcohol has existed in one or another form throughout all time. But as to when or in what form it was first discovered it is not certainly known. Other authorities may differ upon concerning the time and the author of its discovery; but as they serve only to contradict each other it would be but an idle expense of time to consider them now. [illegible]

Alcohol was known in some form and in combination with other things in the most remote ages of antiquity. We are even told in Holy Writ that after the flood the date of which is reckoned at 2348 years before Christ, Noah planted a vineyard and drank of the wine and was drunk. It is also spoken of by the earliest profane writers whose works have been handed down to us. Homer who lived nine hundred years after the Christian era frequently mentions wine in his works and notes its effects on both mind and body.

The term alcohol is of Arabic origin and from the expression

It is supposed by some to have been discovered by the Egyptians. The use of the still was known in the seventh century. But ardent spirits are said to have been unknown to the Greeks and Romans. The first spirit known in Europe was made from grapes and sold as a medicine under the name of alcohol.

The process of obtaining wine is divided into three stages, first fermentation; second distillation; and third rectification.

By the process of fermentation which certain vegetable substances undergo when subjected to the influence of heat and moisture a chemical

liquor is produced, such as wine, cider, ale, &c. This wine, when subjected to the process of distillation produces what is known as ardent spirits. I find on subjecting this spirit to the process of rectification we have pure alcohol.

Pure alcohol is a colorless fluid — has a pungent odor and a hot pungent taste, of specific gravity [illegible] at the temperature of [illegible] — boils at 173° and it has never been frozen although it has been exposed to a cold of —166° by means of a bath of [illegible] and [illegible]. It is [illegible] and [illegible] are [illegible] [illegible]

Oxygen and its formula is $C_4H_6O_2$
=46. Its specific gravity is .795

Alcohol as a medicinal agent is one of the most powerful and most valuable stimulants we possess; but it may be resorted to with a prospect of benefit in all cases where it is necessary to stimulate to support and to sustain the vital powers of life. It is a fact that alcohol acts as an irritant and certain poison when administered [illegible] and it may be [illegible] to do the [illegible] of [illegible]

Other effects are attributable only to the chemical influence of the alcohol upon the constituents of the human [illegible]

The main point of this act is

is as follows: the alcohol possesses a great affinity for water — attracts it from the different tissues to which it is applied and when this are of an albuminous or fibrinous nature it coagulates the liquid albumine or fibrine. The irritation and inflammation set up in parts to which it is applied depends, in part, upon the resistance which the living tissue makes to the chemical influence of the poison — in other words it is the reaction of the vital forces brought about by the presence of the alcohol. But besides the chemical influence of this liquid, by its action upon the nerves, it acts as a

cause, says he, is due to diminished chem-
ical action, in virtue of which it sets
up local irritation.

Taken internally alcohol acts as
a stimulant or a narcotic poison according
as it is taken in large doses at once
or in smaller ones and often repeated.
When taken in large doses it
acts as a deadly poison. Two
drachms of alcohol injected into
the jugular vein of a dog coagulates
the blood and caused instant death.
Introduced into the stomach of
cats, dogs and rabbits it produces
an apoplectic condition. This
state is preceded by a [illegible]
action of the brain. Commencing

the stomachs of animals that
died from the effects of poison the
lining membrane of the organs
presented well marked signs of
inflammation showing the poisonous
action of the liquid.

The effects produced on man
are not uniform but are varied
according to the strength of the liquid,
the quantity taken, the circumstances
in combination with which it is
taken, the age, sex, temperament and
constitution of the individual and
the temperature of the climate.
For instance, a strong, robust, healthy
man can better endure the toxicol-
ogical effects of this than can

one of delicate and feeble constitution and whose vital force is more or less impaired by other causes, to a general debility may be stated more or less than a common or healthy person. Thus a person who could not, or, perhaps, can drink more of this fluid in a cold climate without suffering materially from its effects, if it than the same person could in a warmer or a more temperate climate.

Alcohol is now used in many in its pure state as a medicine, but it is always taken in a diluted form, that is in combination with some other liquid. Such as Water, Brandy, Gin, Gin, the various

kinds of wine and the preparations,
brandy, gin, and whisky are the
forms in which alcohol is generally
used and of these, brandy is more
frequently employed than anything.
The internal use of alcohol may
be thus summed up: 1. as a stimulant
stimulant — to relieve pain and
exhaustion and to assist to fix
digestion. It is given in low forms
of fever for its stimulant and re-
storative powers; it is given to sup-
the powers of life and to prevent pain
during the process of labour and
[illegible] — to [illegible]
[illegible] and to [illegible]
in relaxing the parts from a [illegible]

of the heated animal. It is also employed quite extensively in some cases of delirium tremens.

The poisoning by digitalis and tobacco and by the salts of cinchonia, quinia, affinity and ammonia are employed to arrest the action of the heart. In mild cases therefore, unaccompanied by inflammatory symptoms, a small quantity of spirituous water with a little nitrous, tartar water, is often a most efficacious remedy".

Externally, it has been employed as a stimulant to assist the recovery from the effects of apoplexy. But it is of little use in the case. Its measures as have an other

and more efficient agents. It is sometimes applied to tender and delicate parts with a view to hardening the cuticle, such as the nipples of parturient women. It has been applied with benefit to bruised and sodden tissues, and to malignant and ill conditioned ulcers with a view to its stimulating and antiseptic action. It has been used, and with some advantage to relieve the pain of cancer and to stimulate paralyzed parts. A mixture of iodine and water has been proposed as a cold cure for hydrocele.

When alcohol is taken internally it excites the system, and second

power augments the energy of the mental faculties and sends the blood of life with increased acceleration along its accustomed channels. This effect however is limited to its moderate use.

The doses and the modes of administering this agent are so familiar to every one that I deem it unimportant to enter into any particulars in this connection. I shall therefore pass on to the consideration of the subject in some of its observations.

The pharmaceutical preparations of most importance are adjuncts in a large number of preparations for instance "Collodion, Chloroform,

Idaho, some of the syrups, all the tinctures, alcohols, ethers and resinous extracts. It is added to the vehicle, some of the medicated waters and one or more of the decoctions and infusions to assist in their preservation and as a vehicle for certain active medicines, as in spiritus ammoniae and acidum sulphuricum aromaticum."

Having now spoken of the origin of alcohol, its history, its mode of preparation, its therapeutic value, circumstances modifying its effects, its chemical properties, its physical properties and toxicology, and some of its [illegible]

We will now proceed to notice some of its abuses and its dangers.

Perhaps of all the evils in the world none would so impoverish and so sad an influence on the human family as do endoxenting liquors.

Go where you will — look the cloud tides of pagan Greenland to the solitary wilds of uncivilized Africa — from the black shores of the Pacific to the serene plains of Immortal Utah or from the heights of Lake Superior to the Gulf of Mexico — and you will everywhere find a people who are more or less, to the damning influence of the excessive use of alcoholic liquors.

our land with drunkards — our streets
and lanes with beggars — our poorhouses
with paupers — our almshouses with
paupers — our jails and penitentiaries
with thieves and murderers, and our
cities and towns with sorrowing
wives, heart broken widows and
starving and helpless children.
It destroys all moral principle —
all sense of power — all feeling
of humanity. It changes good
nature to churlishness, a kind
husband to an unfeeling monster
and a dutiful son to an unprin-
cipled villain, without natural
affections; and an industrious
thriving man to an idle, good-for-

Of [illegible] everything that is [illegible] both in [illegible] and character! It eats up the [illegible] of [illegible], and [illegible] to all other vices and to almost every evil and calamity that can be mentioned. It corrupts both body and mind and sinks [illegible] the most [illegible] man to a level with the brute.

Why is it, that [illegible] and women will allow themselves to indulge in the habitual, excessive use of this destructive drug? [illegible] never been able to conceive. It [illegible] no [illegible] something

for do not in the morning of life
is not for the longest or most
with pleasurable sensations or pictures.
And for men, the worst of
all God's creatures can consent
to become a beast — and worse than
a beast — for the more like you
moments wild excitement carried
beyond mere comprehension.
(1) The effects of habitual intoxi-
cation is to impair the mind, and
and predispose it to disease. In
fact, that it is the cause of many
diseases is wholly beyond doubt
such as delirium tremens, chronic
diseases of the liver and stomach
such as inflammation of the bowels

[illegible] — Epilepsy — [illegible] diseases of the [illegible] — apoplexy and many other maladies.

The effects of a paroxysm of intoxication are by most authors divided into three stages. First the stage of excitement — Second the stage of intoxication and third the stage of coma or apoplexy. I will briefly describe the phenomena of the three stages depending towards; chiefly on Dr. Carter's Review in Book ii in my quiz. In the first stage the system is one [illegible] excited the mind and body are both invigorated to [illegible] more [illegible]

more brilliant. the pulse is increased in frequency. the face grows red, the body animated and sometimes red, - care and anxiety are banished from the mind and the individual is disposed to pick out quarrels.

Cyclon prostration of body and mind are apt to be made and sometimes indiscretions are committed. second stage of the day, the brain becomes disordered - all its faculties are in fever and a state of delirium is set in. the senses become confused and deranged - patient is more or less interfered with the morbid ideas than prevail and the individual

falls to the ground. Third stage.
Then comes on the third stage in this disgusting disease. At this time there is almost an insatiable desire for sleep. Consciousness still remains. Every thing is confusion and chaos — the blood circulates wildly through the brain — the heart beats violently — strange noises ring through the ears — the stomach is often irritated and nausea and vomiting ensue; and when large quantities have been taken coma or insensibility is to often the fearful result and then the troubled sleep, drowsy sleep knows no waking.

such was killing [illegible] happy
very unfortunate fatal [illegible] the
phenomena accompanying a paroxysm
of intoxication, as Dr. Pick observes, of poisoning, by narcotics.

But it seems to me that we might very properly make a fourth stage of this description, — that of recovery, with the fact, so often heard the drunkard's cry, that getting drunk is nothing for getting sober is the misery of it.

And if we may judge of it from the appearance, on which first occasions gave the beginning of the "spree" it is very [illegible] terrible, "are not what we have

is some truth in the [illegible]. When the diseased awakes from [illegible] sleep he is, as Carter [illegible] in his very valuable work, "secretions are all shut up — the urine is passed with difficulty — there is excessive thirst — the skin is hot and feverish — the mouth foul — the breath offensive — the nervous system in a state of perfect exhaustion — the eye has lost its spirit — the head aches and is giddy — there is sickness at stomach and a degree of depression and prostration proportioned to the previous excitement."

Now if the diseased feels any

pleasure in all they do that he
have to may, or. It is that the last
for pleasure must be undertaken
to prevent.

But this is not all the trouble
and bonds desired upon him
and his family; his friends desert
him, his neighbors avoid him
and his relatives blush to own
his name. He loses pleasure
for business and the community
loses confidence in him — his
prosperity is turned to adversity —
he gradually sinks in business
— his property is squandered
and finally he is left wretched as
and shunned as an **unhappy**

reward. But if there is any business of life — any trade or profession in which morality and sound sense should characterize the man more than in another, it is in the practice of our own profession.

There is no business or profession in which the mind, perverted by this insidious bias, can make greater or more fatal mistakes. Nowhere never so small, in the weights or measures or in the selection of the proper article may be invaluable life and it may be the life of one who is ill prepared to die. Such a mistake may cost the [illegible] doubts after the [illegible]

[illegible] grave and cast a [illegible]
[illegible] many a [illegible]
upon the practice of our own pro-
fession especially, but Christian
"we want no flights of fancy, no
wand sound judgment & the
common sense." We do not want
the mind clouded and stupified
but we want it clear and rich
with all its faculties in full
play. We do not want a man
in the clouds, we want him on
terra firma and keep his feet on
above all others should be cared how
they go [illegible] although the
depend upon the [illegible]

A

Clinical Report of Cases,

Submitted to the Examination
Of the
Provost, Regents, & Faculty of Physic
Of the
University of Maryland.
For the
Degree of Doctor of Medicine.
By
William B. Everett
Of
Maryland.

Eliza Young:

Admitted - - - - - - Feb. 4th.

Occupation - - - - House Servant.

Age - - - - - - - 53 years.

Sick - - - - - - - 8 days.

Diagnosis - - - Dysentery.

The following symptoms were well marked: The patient very feeble, with a weak quick pulse, no appetite; complains of pain in the abdomen on the slightest pressure, evacuations of a mucous and bloody character, and attended with violent straining at stool, and to her other discomforts is added a very sore

mouth from excessive use of mercury.

She has been placed upon the following treatment, viz: hot poultices to the abdomen. 15 drops of the tincture of opium in mucilage consisting of gum acacia and water in the proper proportions, to be administered as an enema every 3rd hour while the bowels are irritable; and for the mouth.

Oleum Terebinth - - - ʒ ij
Gum Acacia - - - ℥ ij
Aqua - - - ℥ viii

to be used as a gargle several

times a day.
℞ Potass. Chlor. - - - - ℥ij;
syrup - - ℥ij; Cinna. Water ℥ij;
Aqua destillata - - - ℥v.
Of this mixture a tablespoon-
ful is to be given every
two hours. For the nourish-
ment of the patient rice water
was ordered. Chalk mixture
after each operation. On July 7th,
there was no amelioration of
the woman's symptoms.
She still complained of a-
cute pain in the abdomi-
nal region upon the slight-
est pressure. As for food,
she takes nothing but tap-

ioca and very little of that.
The alvine evacuations have
diminished somewhat in
number, which is favor-
able. It seems that the in-
jection has been discontin
ued by the nurse, not-
withstanding which, the
bowels as above-mention
ed are moved less fre
quently. 4th. The symptom
have undergone some improv-
ement since yesterday, the
number of motions are not
so many — the pain about
the colon is less severe, con-
dition of the mouth improving.

the woman herself says she feels better. The same remedies continued. 10th. Complains of severe headache, the other symptoms about the same. No change in the treatment. 12th. Inflammation of the eyes has taken place, for which three drops of a solution composed of 4 grs. of nit. silver dissolved in one ounce of water is to be dropped in the eyes once daily, and a rag kept constantly wet with a solution of sulphate of zinc grs. xvi to eight ounces of water is

to be placed upon the lids.
13th. The eyes growing worse,
to the remedies for their
relief is added Red Oint. of
Mercury made of Hydrar.
Oxid. Rubr. grs vii, and simple cerate ℥i, to be rubbed
on the eyelids at night.
Chlorate of potassa stopped,—
continuation of the other
remedies. 15th. Mouth nearly well,—pain in the
stomach better,—eyes worse
in the morning, no change in
the treatment. 17th. The
case gradually improving,
mouth entirely well. The patient

beginning to experience a desire for food. 22nd Looking better, appetite increasing. The number of evacuations per day reduced. 24th. The woman is improving from day to day, but the passages have not yet lost their dysenteric character. The conjunctivitis has almost totally disappeared, & the eyes have resumed a healthy appearance, though the patient still complains of a dull pain, without them. The wash for the eyes continued. The other medi-

-icines stopped. The
doctor ordered a teaspoon
ful of camphorated
tincture of opium to
be given three times
daily, 8 7th. Appearance
of sudamina which oc-
casionally accompanies
certain fevers, 9 7th. It
complains of severe pain
setting in a few hours
after each meal, which is
probably due to deficient
digestion; it will no doubt cease
as soon as the stomach acquires its
tone. Aug. 6th The patient has
left the house convalescing.

Margaret O'Brien, a seamstress, aged fourteen years, afflicted with dyspepsia, entered the Infirmary July 25th. The symptoms observed in this case are similar to those usually attending this disease, viz; pulse very weak, uneasy sensations in the epigastric region an hour or two after eating, unpleasant taste in the mouth, irregular appetite, &c. She was placed upon

Rad. Gent. - - - ℥ ii;
Sodae Bicarb. - - - ℥ iii;
Cort. Aurant. - - ℥ i;

Aquae Emult. ---- Oi
of which a wineglassful was
ordered 3 times daily, con-
stipation to be obviated by some
simple cathartic. 7th. The
patient complains of a dull
pain about the head. There
was no perceptible improve-
ment in any of the symp-
toms. Ordered oz. i of cas-
tor oil ordered when the bowels
are torpid. The other
medicines continued.
12th. The pain in the head
which probably proceeded
from costiveness or disor-
dered stomach has ceased.

30th. The disease may be regarded as in the first stage, inasmuch as the patient suffers from indigestion due to the insufficiency of the gastric juice secreted. From the treatment used the girl seemed to derive some beneficial effect.

On Aug. 4th. the patient left the house apparently improved in health.

On June 7th 1883 was admitted into the Infirmary a young girl named Margaret Burnman, aged 8 years, who had had Chorea for some two months. The symptoms remarked are very slight indeed. There was a little twitching of the fingers of the left hand sufficiently which might very readily have escaped the notice of a careless observer. The disease very rarely attacks at the commencement the whole body, but in cases of long standing most of the voluntary muscles are more or less affected.

The pulse as is usual in this affection, was not more frequent than in health. She was put upon Vin. opii Pot. Carb. Pem. 3 grains of which were directed to be given 3 times a day, Powdered rhubarb, 5 grs., with 20 grs. of calc. magnesia were ordered to be taken once to loosen the bowels. The shower bath once a day. July 5th. The iron which the patient had been taking up to this date was now discontinued. The following prescription was ordered, Tinct. Julin. — ℥ss. Aquae Mentth. Vir. — ℥ss. Aquae Dist. — ℥i. of which a teaspoonful is to be given 3

times a day. On July 18th the doctor saw proper to increase the quantity of Sul. Zinc taken to two grs. 3 times a day. 21st. There was no change made in the quantity of the medicine last ordered. The disease is of so trifling a character that the little patient appeared to suffer no inconvenience from it. When the girl left the house, which was on the 23rd of July, there were still remaining the characteristic spasmodic contractions of the fingers.

there entered into the Infirmary, July 9th, a sailor, who, for some three weeks, had been affected with syphilis. Upon examination it was discovered that the man had a phagedenic ulcer on the head of his penis, at least one third of which had been destroyed. The lymphatic glands in one of his groins were found inflamed. The surgeon applied at once strong nitric acid to destroy the specific character of the sore, which, if let alone, would have involved the whole organ. This severe measure was

followed by flax seed poultices to the glans penis.
A poultice was also applied to the bubo to cause its suppuration.
10th, The internal portion consisted in bark and molasses. Mercury should not be given in this kind of sore, the indication is to build up, not to break down the system. On the 11th the sore was directed to be touched twice a day with a mild solution composed of twenty drops of muriatic acid to one ounce of water.

15th. The internal remedies with the nitric acid and water continued. Tinct. Ferri Muriatis gtt. xxx. continued to be given every three hours. Rags kept wet with a watery solution of a mixture of the following two medicines, viz. Pulv. Zi; water ℥ viii, to be applied to the part. By the 16th the wound and adjacent parts in one mass assumed the surface, the pus being nearly destroyed. On the 17th the tissues are found very much inflamed, resulting from destruction of the small arteries of the part, causing

occurred. The pulse when I first came in was feeble, but at this date was nearly natural, — appetite good. 17th. The sore was washed with nitric acid. The other remedies were still continued. On 18th the purpura of the disease appeared. Again the watery solution of opium blistered & a poultice for the blisters was ordered. On 20th blistering and simple cerate were used. 30th Morbus [illegible] (perfectly healthy) granulations having [illegible] the patient left the house the sore being nearly well.

Dennis O'Rourke.
Admitted [illegible]
Occupation Soldier.
Age 22 years.
Sick — 4 days.
Diagnosis [illegible]

The symptoms of this case were a very severe tongue, fever about one hundred beats per min., diarrhea before his and [illegible] [illegible] in this case previous to his coming into the [illegible]

[illegible] character
is the irritation, irritability
of the muscles showed
out as more particu-
larly marking him to
be the [illegible] and other
became evident on ex-
citing them. Intellect
was not always clear
the patient complained
of no soreness of the
chest, a symptom
often observed in con-
gestive fever.

He was but often
very simple breathing,
one — [illegible]

wine
was directed to be ad-
ministered every
hours, or sooner
if necessary. On the
6th it was ascertained
upon inquiry, that
the soldier had been
delirious throughout
night and part of
the morning, when
questioned he complained
of no pain in the
head nor of constipa-
tion of the bowels; the
tongue was slightly
coated in the centre; the

pulse was not very compressible, but on the contrary rather full, and quick, possibly not so frequent as the day before.

No change in the treatment was made.

9th. I was informed by the attendants that the patient was again delirious in the night, and left his bed some four or five times.

Notwithstanding these delirious attacks he

still complained of no uneasiness in the bowels, and was free of pain. The bowels being so frequent the chalk mixture had not been used. The urine was given to Mr. Regular internal. Upon examination the pulse was found 84 & the so strong as on the 6th. 9th. — Vinegar caution was ordered, one table spoonful about every

three issues.
On 10th of the month the man was looking better,— his pulse was more natural, and the other symptoms more favorable.
(the urine) and alkaline solution were continued. On the 13th sudamina made their appearance, no alteration in the medicines made, 15th "convalescing." The alkaline solution was discontinued. On July 16th he was no longer under medical care.

On May 20th 1861 there entered into the Baltimore Dispensary, a negro man, sailor by profession, who, according to his account, had been sick five days. His disease was pronounced by Dr. Chew to be pneumonia.

The usual symptoms of the first stage or that of congestion, presented themselves upon an examination of the case, viz; cough, murmur respiration, dull sun

on laboring, a death breath, loss of strength and affection; in the physical signs, there were heard upon auscultation, the inspiratory rale and other characteristic sounds.

The day he was admitted he was placed upon the following treatment.

Calomel grs. ii. Sulphate grs. 8. Cake. Mag. bis. was ordered to be taken at once, in a mixture with the Liq. Sodae Bicarb. - - - 3 ij;

Ipecac. — — — — — ℥ss.
Ol. Anis — — — ℥ss.
Aqua — — — — ℥viii.
One tablespoonful of this prescription was directed to be given every one or two hours according to the severity of the symptoms.

If pain was also complained of more than usual upon the liver, and the bowels to be followed by a warm bath, frequently, the calomel, or three grs. were to be administered

every two hours. Magnesia
Hydrax. Sub. [illegible] gr xxx
Olei Pulv. — — — gr x.
Ipecac. Pulv. — — gr x.
to be made into eight pills;
one to be given every three
hours; the cough mixture
every hour or so. At when
the pills were taken,
The founders ordered the
day previous, stopped.
27th. The boy began to im-
prove. Cam. medicine
continued. 28th. [illegible] ma-
lient [illegible] well. In eve-
ry respect. Pills were
discontinued, — cough mix

ture directed to be taken every two hours. On May 3rd the boy continued to improve, though mixture was still regularly given; his appetite was now tolerably good.

On June 3rd the man was regarded as convalescent convalescing. He severely suffering in the first stage of the attack, his was a rapid recovery.

Baltimore Jan 7th — 1862

A Thesis on Pleurisy

Respectfully submitted to the perusal of the eminent faculty of Medicine, of the University of Maryland

Members of faculty
- Dr Smith — Surg. & Anat.
- Dr Chew — Prac. & Mat. Med.
- Dr Aikin — Chemistry
- Dr Millenberger — Obstetrics

Gentlemen allow me to remark by way of apology, for the feebleness of my Essay, that it can only be a simple deduction from theory; as practical and personal knowledge is not within the jurisdiction of mere Students.

We hope therefore, and believe, that you will make every due allowance. Accept my warmest thanks for your kind instructions; & permit me to sign myself your Most Obt.

J. M. Priber

Pleurisy

It becomes necessary first to ascertain what organ or part is affected in this disease, and the nature of that affection. Pleurisy is understood to mean inflammation of the serous membrane, which surrounds the lungs, and that also which lines the thoracic walls; the part enveloping the lungs is termed the Pulmonary pleura; that upon the walls of the chest, the Costae pleura

This membrane is subject to similar changes and inflammations as those of any other serous structure

The pathological appearances of this membrane in a state of disease are redness & dryness: it is also covered partially by patches of plastic lymph which adheres closely to the inflamed surface. This lymph being endowed with vital characteristics has a tendency to;

form into serious bands of living tissue; these bands unite the two pleura together, and thus by preventing the contraction of the lungs embarrass their function.

Pleurisy may exist alone or combined with Pneumonia; the pleuritic symptoms may predominate, the disease is then termed Pneumo pleuritis; but if the Pneumonic symptoms are greater it is called Pleuro Pneumonia.

Pleurisy may exist on one or on both sides; the greater the ~~amount~~ extent of surface involved, the more serious the disease; hence there is more danger where both sides of the chest are affected than where but one is attacked

It seems to attack the left side more frequently than the right.

The pleura is a smooth membrane and

its opposing surfaces glide easily and smoothly upon each other, in a state of health; but when thickened & uneven, inflamed and dry, it no longer performs its office so gracefully, but hitches, rubs and jars, communicating a thrill to the parietes of the chest, which may be perceived by placing the hand upon its walls; a sound like that produced by the rubbing together of two ~~fine~~ fine pieces of parchment is communicated to the ear. This is one of the most certain Diagnostic signs; and is denominated the "friction sound"; there are no other diseases in which this sound can be heard or recognized, save this, & Pericarditis

The friction sound is only present in the beginning and subsidence of the disease. It depends as before suggested

upon the rubbing together of two dry and uneasen surfaces. When serum begins to be poured out by the diseased pleura, and the sac is distended by its bulk, you no longer hear the friction sound, likewise when the surfaces have become adherent the sound is lost, as in dry and chronic pleurisy because they can no longer glide upon each other. The pleura while in a a healthy condition secretes serum; in disease this serum is supplanted by coagulable or plastic lymph, pus and bloody serum, This plastic lymph is of the consistence cream and is of a light-gray color; which gradually becomes harder and is presently marked with indistinct red lines: these gradually become more perceptible and defined

and are seen to be blood vessels; running to and fro throughout the mass of lymph, making it a constituent part of the living animal. This membrane is sometimes very thick at other times extremely thin: when thick it is the effect of 2 or three layers placed upon each other. The cavity of the pleura sometimes contains a yellowish limpid serum, which is poured out from the vessels because of some obstruction to the natural circulation; as in certain diseases of the heart, and is independant of pleuritic inflammation

The effusion of pleurisy is nothing else exhaled from the serous membrane surrounding the lungs; as there is no rupture of the vessels of the part, to give rise to such condition

If the pleura remain a closed sack, its contents or the enclosed serum emits no odor; but as soon as the air makes an entrance into the cavity, the character of the fluid is changed, it becomes thick in consistance and fetid in odor. The air may enter through a fistulous opening from the pulmonary tissue ~~or~~ oesophagus or trachea; otherwise it may enter through an external wound or puncture; Dr Watson mentions a case where this stinking pus was found in the pleural sack, in a patient who had swallowed through a dose of caustic potass; yet he think that air might have entered through some channel, though he was unable to find that channel. Air or gas

is sometimes found in the cavity alone but more generally associated with fluid; the fact of air or gas being the sole contents of the pleura is ascertained by puncturing the walls of the chest in a subject who has died of pleurisy, in such case the air will make its exit with a hissing noise, and with such force as to extinguish a lighted taper; if the chest be punctured under water bubbles of air will ascend to the surface which is another proof of its containing an aeriform substance

Let us next inquire as to the effect produced by these morbid secretions. This will vary according to the extent of the effusion; the quantity of the fluid may be small or it may be very large

The oppression to the vital organs and those within the abdomen, also the sufferings of the patient will be proportionate to the amount of fluid effused. When the liquid is on the left-side and of considerable amount, the heart will be driven over to the right, and heard to beat as much to the right of the sternum as its proper situation is to the left of it; the lung is pushed back towards the vertebra; the stomach, liver and spleen are also displaced and pressed lower down in their respective hypochondria, the displacement of the liver however, only occurs when the right pleura is involved in the disease also. The affected side is more elevated, rounded and prominent than the corresponding side, the intercostal spaces

are wider, The lung is so compressed by the fluid and bound down by false membrane sometimes as to almost to induce the belief of its entire absence; it is said that some of the old authors believed the lung to have been destroyed by suppuration in these cases; but it can be found always by close examination; it is a fact, not merely of the presence of the lung, but it is often in a healthy condition; which may be ascertained by cutting loose its bonds, when it will dilate to almost its natural size by inflation with air, it is also longer than hepatized lung but sinks in water, neither is it crepitant until air has been introduced within it

The cellular tissue is sometimes destroyed, and the surfaces of the air cells

and smaller bronchial tubes become adherent, when it presents the appearance of a piece of bruised muscle or steak, this condition has received the appellation of Carnification

We will next consider the cause and nature, of the various sounds given out by the chest in auscultation and percussion. As the capacity of the lungs is reduced by the liquid contents of the sacs, and the function of the lungs impaired, so must the respiratory murmur be rendered less distinct. When the compression is considerable and the cavity completely filled up with fluid no sound can be heard. The voice is also more or less affected; if the cavity be only partially filled, we have bronchophony; if entirely filled the voice is completely hushed

Percussion of the side of the effusion emits a dull flat sound, because of the absence of the healthy lung which contains air generally.

[illegible]

[illegible] whether there be immediate [illegible] existing. In order to [illegible] and to ascertain the true nature [illegible]

the dull sound will be heard at [illegible]

[illegible]

If the lobe of the lung
[illegible]
be not entirely filled with the liquid,
[illegible]
[illegible]
[illegible]
[illegible]
Percussion, the lower part dull and
flat; above [illegible]
[illegible] with lung, yet air is not
[illegible]
would be no sound; if the patient
[illegible]
give a clear sound. The bronchia
a dull flat one; if he lies on his
back, the sounds are [illegible]

[illegible]

[illegible] mentioned. Now a living constituent of the body, under the [illegible] disease, the [illegible] pneumonia

[illegible]

There is but seldom entire duration in pneumonia; it being confined to certain spots or points; it is [illegible]

[illegible]

[illegible]

[illegible] thing is less distinct on the affected side [illegible]

[illegible]

pressure increases in the diseased side, [illegible]

[illegible] cathing, and there is [illegible] voice

[illegible]

[illegible]

This is one of the surest proofs of pressure into the pleura; it is usually

[illegible]

[illegible] with those of the second side;
it assists the diagnosis

[illegible]

which court will prevent their contraction
and destroy the use of the lungs to
a great extent.

In Chronic the patient
[illegible]

[illegible]

[illegible] there is great and complete pressure on that organ, the [illegible] entirely.

Next let us inquire into the cause of this [illegible]

The blood [illegible] to [illegible] of [illegible] inflammation [illegible] organs to the blood, was given [illegible] to the [illegible].

[illegible] nothing.

but when of [illegible] which is most common, it bears a different appellation [illegible] with effusion. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

the pleural sac

[illegible]

on the bottom of a tumbler; it is ca[illegible]
[illegible] bacteria, [illegible]
the disengagement of [illegible]
[illegible]
[illegible] bacillus, or by bubbles of air bursting.

[illegible] from its similarity to the tinkling of a distant bell. There is also another [illegible] in the pleura, which the patient is [illegible] sound. The presence of air always renders the disease more dangerous.

The various modes of ingress of air have [illegible]

20

Mode of Termination; It may terminate in death [illegible] complete recovery; at the commencement of [illegible] which will [illegible] it may [illegible] [illegible] the [illegible] completely [illegible] the thin [illegible] of lymph; in which case the [illegible] of the chest falls in, and a permanent deformity remaining; but it may end in death.

The patient may be destroyed by the pressure on the lungs of the effused fluid, or he may die by exhausting suppuration; in the latter case death occurs by asthenia.

Of pneumothorax, the prognosis is unfavourable.

Mode of attack. The disease sets in with a rigor followed by fever. There is cough and restlessness, inability to change the position and dyspnoea. These symptoms resemble those of pneumonia; but there is pain and of a much more acute nature than in other forms of inflammation. The dyspnoea and cough are not conspicuous as in the other disease. The [illegible] of

[illegible]

[illegible] the pericardial effusion, the [illegible] [illegible] generally the upper [illegible] [illegible] posteriorly; [illegible] pathologist [illegible] [illegible] that the pleura [illegible] [illegible] because of the greater amount of fluid [illegible] the pleural of the [illegible] [illegible] [illegible] sometimes [illegible] [illegible] [illegible]

[illegible] to relieve, as from the [illegible]
[illegible]

[illegible] as possible; the breathing is short and
[illegible]; [illegible] the other has to perform
[illegible] has been slowly filled, the cavity is not [illegible]
[illegible] the altered condition of the [illegible]

[illegible]

[illegible]

[illegible]; In some cases the dyspnoea
is very obstinate, such cases generally end
fatally; in some cases the difficulty of breathing
lasts but a short time, the remainder
but some diminishing in intensity till the
dyspnoea —

the pain is mild throughout the whole disease. This symptom is an index to the severity of the disease. Early in the disease the patient cannot lie on the affected side, it causes too much pain; later in the disease he cannot lie on the sound side, as it embarrasses the respiration; when the cavity is filled with serum, he either lies on the affected side (which is no longer painful) or partly on the diseased side and partly on his back. No one of the symptoms enumerated is strictly speaking pathognomonic of pleurisy; the friction sound may be met in pericarditis; the dyspnea is present in pneumonia & bronchitis; pain and fullness on percussion are likewise experienced in hepatic affections; but if all or several of these symptoms are met with, the diagnosis is pretty certain. The form and size of the chest and its unnatural motions also serve to prove the true character of the lesions within

The affected side is more rounded and elevated than the other, produced by the effusion pressing upon the internal walls of the chest and of making them assume this form; there is no motion or but little of the diseased side, the lung is pressed back towards the spine, and is unable to expand

When the liquid is removed by absorption or puncture, the lung often remains permanently contracted and compressed; this condition is followed by falling in of the walls of the chest; this deformity is very permanent and conspicuous. It is caused by pressure of the external air upon the thoracic walls and nothing within to resist or sustain the pressure from without. The expansion or collapse of the walls of the chest should be strictly noticed. or rather, not overlooked; these conditions are the characteristics of pleurisy, when they are present, the expansion might occur in hydrothorax, but this disease is of rare occurrence

Baltimore

Treatment -- If the disease is early seen bloodletting is the first resort, and if the stitch and pain be not removed by or if they return after the first bleeding, venesection may be repeated; and this courses should be pursued so long as the symptoms demand it, provided the strength flag not, and there is not danger of generating prostration and debility.

Bloodletting is well borne in this disease; and it often requires a considerable amount to relieve the pain and stitch in the side, and to render the pulse soft and compressible. The patient should be bled in the upright position. When the pain ceases and the breathing becomes easy, or if there be a tendency to faintness in the patient, the bleeding should be stopped. The bleeding should be free and full at first, to prevent if possible the necessity for repeating it. The blood taken in this disease is buffed and cupped; the effects of inflammation. Mercury is the most best remedy. It should be given in small doses and carried to ptyalism, it should be combined with opium to remove

its retention in the system and more certain action.

In order to obtain the speedy action of mercury it is necessary to rub the ointment in the thighs and arms while it is being administered internally. This plan will often bring the disease to a speedy termination

When a considerable amount of effusion has been poured out, and the cavity of the pleura is completely filled up (which condition is ascertained by percussion and auscultation) the chest sounds dull on the affected side; there is bronchial respiration and voice. In order to remedy this condition, we first resort to the obvious means, to promote absorption. The patient should be kept in a state of repose, and on low diet. He should take mercury and diuretics, such as Squills and Digitalis, absorption may be aided also by means of counter irritation with blisters; these should not be employed early in the disease, during the inflammatory stage; later in the disease, during effusion and after inflammation has entirely subsided they may be used with great benefit.

When the wall has collapsed or fallen in towards the lungs, if some

be restored to its natural rotundity and dimensions, but this rarely occurs except in children. How frequently the deformity is irreparable. In those cases where the effusion is great and the whole cavity is filled up, if the heart be dislodged and pushed over to the right if the separation be much embarrassed and the patient is in danger of immediate suffocation, Paracentesis thoracis is the only resort. In this operation the danger arises rather from the mistake in diagnosis, than from any difficulty in performing it. Very painful effects have attended a mistake in not tapping the proper side of the chest, in consequence of this mistake, the patient has been disposed in a very few minutes. In these cases, one lung is already useless because of the effusion, and the other is rendered so by the ingress of external air, the lung, being

thus pressed upon by the external air - is unable to expand by the comparatively small portion that enters through the natural orifice or channel.

There are various signs and appearances, by which we are to be guided in the operation; and which render it needful. First, if there be dullness over the entire side, by percussion 2dly if the intercostal spaces be effaced and the ribs elevated 3dly if the side be larger and more rounded than the other. 4thly if no respiration be heard on the affected side 5thly if the opposite side be natural in sound and dimensions

The operation should not be resorted to with all these signs present, unless the life of the patient be in imminent danger

Dr Watson gives the indications as follows. First when

the life is in danger from Dyspnea Apnea or Syncope, provided there be no cause for these distressing symptoms except the accumulation of liquid in the pleural cavity; 2d when the patient though not suffering much from the dyspnea is gradually wasting away, and sinking into a state from which it would be difficult to arouse him if it were allowed to continue, 3d indication when the cavity contains pus; no matter how it is accumulated there, it must be let out

For these three indications Paracentesis thoracis is the only resort or prospect for relief

Before the opening of the wall of the thorax, it should be punctured with a needle to ascertain the nature of the contents within

If the contents be merely serum, it will appear of a nearly transparent consistance and will be watery, it will also flow easily and freely from the orifice, If it be pus it will flow more slowly, and require a longer time for its exit from the body; the the fluid should be let out if possible, if it be merely serum, the opening should be immediately closed; but if it be pus, the wound should be kept open to allow its escape, The tapping may be repeated as often as there are a sufficient of the distressing symptoms.

The opening should be made at that part of the chest, where the liquor can be more readily approached and most completely let out. Some recommend the opening to be made between the 6th & 7th ribs, others between the 5th & 6th if the accumulation point any where, that is the point where the opening should be made

An

Inaugural Dissertation

on

Malaria,

Submitted to the examination of the

Provost, Regents, and Faculty of Physic

Of the

University of Maryland.

For the degree of

Doctor of Medicine.

by Samuel Fairbank.

Malaria.

Hippocrates, the father of physic, remarks that there are three great causes of disease, - food drink, and air. The latter, he says, is by far the most important, because we eat and drink only at certain times, and can even subsist for a few days without either, but are perpetually breathing, and cannot subsist without air but for a very few seconds. His dissertation on this subject relates principally to the temperature of the of the atmosphere, the aspect of places, according to the neighbouring mountains and seas, and manners of the inhabitants. Consequently but little information can be derived from him concerning those deleterious properties

of air, which have been denominated marsh-miasm, miasmata, or, better, malaria.

We have vague accounts of this substance from many of the old writers. Horace mentions something about noxious air, in the autumnal seasons, perhaps from noticing the evil effects of breathing the atmosphere of the Pontine marshes, which lie to the South of Rome.

Frustra per autumnos nocentem
Corporibus metuemus austrum.—

But the first writer who held any distinct views concerning the subject was Lancisi, an Italian physician, who flourished in 1695. He attributed the cause of this insidious poison to the decomposition of the vegetable matter of marshes.

A majority of modern writers agree with with Lancisi, but there are many who dissent from his view. The cause of malaria has been attributed by some to animalcules in the air; by Sir James Murray and others to electro-galvanic currents; and again its cause has been assigned to the cryptogamic world. None of these views, however, have found universal favor with the profession and they are all undoubtedly untenable. The theory advanced by Lancisi seems to find more advocates than any other, and it is to this that our remarks are principally applicable.

Dr. Ferguson in a paper, "On the Nature and History of Marsh Poison," published in the Edinburgh Philosophical Transactions, gives some facts which cannot be overlooked in

investigating the cause of malaria, — facts that are apparently at variance with the views of most authors upon this subject. This writer states that it occurs upon dry and arid plains, where not a vestige of vegetations exists. In August, 1794, after a hot and dry summer, the British Army in Holland encamped at Rosendaal and Oosterhout. "The soil in both places was a level plain of sand, with a perfectly dry surface, where no vegetation existed, or could exist, but stunted heath-plants." Here fevers of the intermittent and remittent type appeared among the troops in great abundance.

It will be proper, however, before proceeding further to remark that the most delicate chemical analyses and microscopical examinations have failed to detect any-

thing in the atmosphere that could give rise to the peculiar effects commonly attributed to marsh-miasm.

Many ~~[illegible]~~ instances of malarious fevers occurring where there was no vegetable decomposition going on, might be cited upon the authority of Dr Ferguson, Sir Gilbert Blane, and others; but one will be sufficient for our purpose.

The most common places of its developement are marshes or wherever we have rank vegetation, heat and moisture. The vegetable matter undergoing decomposition is supposed to give origin to malaria. Why we ask, does it occur where there is no vegetable matter to undergo decomposition? Upon the by

and arid plains of Estremadura for instance, "where the country was so dry for the want of water that the Guadiana itself, and all the smaller streams, had, in fact, ceased to be streams." Or, if caused by such decomposition, would the chemist or the microscopist fail to detect the poison? Obviously the theory that vegetable putrefaction is necessary to the production of the pestiferous poison is incorrect.

It would be useless to deny that the exhalations from marshes or swamps may not give origin to malarious poison; but not per se. The atmosphere may be filled with carburetted hydrogen and other gases, the result of decomposing organic matter, and yet none of the

fevers commonly attributed to malaria. The gases act secondarily, i.e., by becoming oxidized, or undergoing decomposition, they abstract from the atmosphere allotropic oxygen or ozone.

This substance is one of the normal constituents of air, and is well known as a powerful oxidizing agent. The carburetted and other gaseous exhalations coming in contact with so energetic an agent as ozone, are decomposed, and carbonic acid and water result. It is by this means that electrified oxygen, or ozone, is removed from the atmosphere, and the absence of this gas give rise to the various phenomena of malarious fevers. Ozone is generally absent just after a thunder-

storm, and this seems to prove that it is produced by the electrical condition of the air. It may also, perhaps, be produced by the electrical currents between the leaves of plants and the surface of the earth. The oxygen, eliminated by the leaves of growing plants, in its nascent condition, is, in all probability, electrified by such currents.

In dry countries, where there is no vegetable matter, as in the case mentioned by Dr. Ferguson, this allotropic oxygen is not present to use there are no thunder storms and no growing plants to produce the necessary change in the oxygen of the air.

It will be observed that the theory here advanced

is that malaria is not a positive, but a negative poison this negative principle being the absence of ozone.

Assuming the above views to be correct, we can explain all the phenomena of malaria — its erratic course and appearance in districts presenting such vast differences in surface, soil and productions.

Malaria is more virulent at night. The season at which miasmatic fevers commence, is generally that at which the greater coolness of the evening causes the formation of dews. During the day through the agency of solar heat vegetable decomposition goes on rapidly; gases are exhaled

and, as night approaches dew begins to fall. Now, as chemical action cannot go on without a certain amount of moisture, the organic matter of the air remains unacted upon during the day, but the necessary amount being furnished at night, chemical action goes on with facility, the gases are decomposed and oxidized, thus removing ozone from the air during the night. In the morning it is again replaced by growing plants, eliminating oxygen from carbonic acid of the air.

A very interesting circumstance connected with malaria is its apparent affinity for the surface. Some suppose this to result from the attraction

between the miasm and moisture; others, to the superior specific gravity of the effluvia. The latter, in all probability, is the correct view.

From this cause the inhabitants of the ground floor of a house are much more liable to be attacked by malarious fevers than those occupying the upper. The gases hover near the surface, and as is well known, the dew is most abundant there also, consequently, when there is no agitation of the air, the oxidizing agent acts only on or near the surface, the air above remaining pure for the exist of oxidizable material to abstract its ozone.

Humidity is [illegible]

movable from point to point by the wind. The atmosphere in contact with the putrescible gases becomes surcharged with them, the wind carrying these along comes in contact with fresh particles of air that contain no oxidizable material, and consequently, containing ozone, chemical action is set up, the gases are decomposed, - the oxidizable substances removed, and the air rendered unhealthy by the abstraction of allotropic oxygen.

A grove of trees will prevent miasma being conveyed any distance, and serve as a protection against its injurious effects. The removed oxygen eliminated by the trees

of the trees, in decomposing carbonic acid for their nutrition, will oxidize the noxious organic matter — purify the air in its passage through them, and prevent its contaminating, or abstracting, electrified oxygen from the atmosphere adjacent to the grove.

The first steps of civilization in a wild malarious region often increase the production of the poisonous agency, by turning up the soil loaded with vegetable matter, and by their subsequent decomposition. But as cultivation advances, the country becomes more healthy in consequence partly of draining and embankments and partly, in consequence of the productive growth to which

the vegetable decay is made tributary. The leguminous and cereal products are gathered and the refuse matter is turned under the surface of the soil and converted into humus, which affords nourishment to the subsequent crops.

There are two other circumstances connected with this subject that do not admit of a very ready explanation. One, that an intervening space of water affords protection against the toxic effect of malaria; the other, that its evil consequences, are rarely, if ever, experienced in large cities. In explanation of the the former it may be said that the noxious material is heavier than air and, coming in direct contact with water

in being converted, is absorbed or dissolved. Its non appearance in large cities is rather unaccountable, as there is always a large amount of decomposing matter, chiefly, however, of animal origin; and may it not be explained from the fact that the exhalations from such a source are already oxidized or unoxidizable?

When the subject of ozone comes to be fully investigated, I have no doubt it will throw great light upon the cause of many diseases, of which we are now so profoundly ignorant. M. Schönbein states that he got several physicians at Basle to compare their lists of critical patients with his atmospheric-

ozonometric observations; and he was struck by the occurrence of an unusual number of catarrhal cases during the periods when his test papers showed that ozone was unusually abundant in the air. Prof. Chuo remarks, as the result of his observation, that phthisis is of very rare occurrence in malarious districts, and this is undoubtedly caused by the comparatively small quantity of ozone in the atmosphere.

Asthmatic patients are very apt to suffer from dyspnoea immediately before a thunder storm, and this must be attributed to an excess of the same agent, irritating and producing contraction of the muscular fibers of the bronchial tubes.

It is also very probable that it is in some way connected with such epidemics as cholera, yellow-fever &c, acting, perhaps, as the predisposing cause.

An
Inaugural Dissertation
Upon
The Uterus and its Functions
Submitted to the examination
of
The Provost, Regents,
and
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of
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The Uterus, And its Functions.

In the female pelvis, at the upper part of the vagina, between the convolutions of the small intestines, and between the urinary bladder and rectum; is found the matrix, Uterus, or womb; an organ, which, from its complicated structure, variety of functions, and multiplied relations with the other parts of the system, may justly be considered the most important organ in the animal economy. The uterus is a spongy, hollow receptacle, somewhat of a pyriform shape, elongated from above downwards, and flattened from before backwards. In general it is about three inches in length, two inches in breadth at the base, and one at the neck; — its thickness is

about one inch. This discription only implied to the unimpregnated uterus; for when in the gravid state, it is, in appearance, a dissimilar organ, as we may have occasion to remark hereafter.

To facilitate the study of this organ, anatomists are in the habit of distinguishing it, into four parts: fundus, body, cervix or neck, and os-tincae or mouth of the womb.

The fundus is upper third of the organ; the body is the middle; and the cervix is the lower third; while the os-tincae is the opening into the vagina at its most depending part.

In relation to its structure, the uterus partakes of several different kinds of organization: the external surface is covered by the

peritoneum, which is a serous membrane, and internally, by a mucous membrane; between the two it is muscular and somewhat peculiar, possessing a very dense and compact character, resembling according to some writers, "a half-tanned hide"; the neck of the uterus, according to the celebrated obstetrician, Dr Bradford, is essentially glandular, and becomes the seat of disease peculiar to glands.
The structure of the uterus therefore is serous, muscular, mucous, and glandular. The cavity of this viscus bears some analogy to its external form: it is divided into the cavity of the body and that of the neck.
The mucous membrane which lines this cavity, is considerably corrugated about the mouth of

the point forming transverse rugæ or wrinkles, which grow less as they extend the body, and which are less evident in the matron than in the virgin. Between these rugæ are observed quite a number of follicles, which secrete and pour out a tough, mucous, which has the property of closing up hermatically the os-uteri during the state of pregnancy. The uterus is very literally supplied with arteries, veins, nerves, and absorbants. The arteries are two in number, spermatic and uterine. The spermatics proceed directly from the aorta, and are chiefly distributed to the fundus of the organ, the ovaria, and the fallopian tubes. The uterine are given off from the internal iliacs

and are sent to the sides of the body and the neck; some of their branches anastomosing very freely with those of the spermatic.
The veins receive their names from the arteries; and return the blood from the uterus; - emptying themselves; - the right spermatic into the inferior cava, the left into the renal vein. The uterine veins terminate in the internal iliacs. The nerves are divided; one set, from the sacral plexus of the cerebro spinal system, the other, from the great sympathetic. It is through the branches of this latter nerve, that the well known sympathy exists between the uterus and stomach and other vital organs is produced. The absorbents follow the course of the spermatic and uterine vessels.

vessels, one set passing to the sacral and lumbar glands, and the other, through the round ligaments, into the glands of the groin. Appended to the uterus will be found two broad ligaments, two round ligaments, two fallopian tubes, and two ovaries. The broad ligaments are duplicatures of the peritoneum, and envelope the other appendages, - as also the vessels and nerves which are distributed to the uterus. The ligamenta teres, or round ligaments arise from the superior angles of the fundus uteri, and pass out of the pelvis through the abdominal ring to the groin. The fallopian tubes originate from the superior angles of the uterus, above the round ligaments. They are about four inches in length, - extending from the uterus to the

Cavity of the abdomen, and terminating in a very uneven fringed like manner; called the fimbriated extremity. The canal through these tubes is extremely small, hardly admitting a hog's bristle at its uterine extremety; but gradually enlarges as it approaches the fimbriated extremity, the diameter of which is probably about one third of an inch. This canal establishes a communication between the uterus and ovaria, and affords a passage to the impregnated ovum, into the cavity of the former.
The ovaries, are contained in the posterior fold of the broad ligaments, a little below the fallopian tubes, at the distance of about one inch and a half from the edge, on each side of the uterus. They are flat, oval bodies, of a pale red colour,

and about the size of large almonds. In addition to their peritoneal covering, they have another their proper tunic; and a fibrous, impervious cord extends from their inner edge to the uterus, - the ligament of the ovary. Physiologists consider these bodies to be ovaria, in the literal acceptation of the term, from the fact of their being found included in their substance, a number of spherical vesicals, - ovula Graffiana; and that these vesicals contain whatever the female provides towards the perpetuation of the species; that they contain the germ whence sprouts the embryo of humanity; whence springs the future man; requiring only the vivifying influence of the male semen for their developement and finish.

These ova, are from fifteen to twenty in number, varying in size from the smallest pin head, to that of a large shot; and filled with an albuminous, transparent fluid.

After Conception we may observe in the ovarium, a fascular yellowish body-Corpus Luteum, filling up the cavity; from which the graafian vesicle had escaped; and a distinct cicatrix may be seen on its external surface, indicating the spot through which it passed into the fallopian tube. Having given an anatomical discription of the uterus, I will now proceed to examine its functions.

The first in order is menstruation.

Menstruation.

This function consists in a peculiar flow of sanguineous

matter from the internal surface of the uterus; and is called the Catamenia, or menses, from the fact of its making its appearance once every month. The development of this function takes place at the age of puberty. This period of life is accelerated or retarded, according to the climate in which the female lives. In our own country, for instance, puberty begins, and consequently the flowing of the menses about the twelfth or fourteenth year.

It is later in the Northern States, and earlier in the Confederate States.

In the Equatorial regions, menstruation is established in some instances as early as the seventh year. Climate has also the tendency of increasing or diminishing the quantity of this

secretion. In the cold regions of the North it is very small, in the temperate climates it is materially increased, and in the intertropical countries it is greatly augmented. In our own country the quantity is estimated at from three to five ounces.

This function, when once established, is continued until the forty fifth or fiftieth year; later in northern and earlier in southern countries.

In colour, the menstrual fluid bears some analogy to blood; but it cannot be blood, as it does not possess all the properties of that fluid; for instance, it does not possess the property of coagulation.

A great many opinions have been advanced, especially of this uterine function; but as yet no definite conclusion has been

arrived at. Some have attributed it to general plethora; and have said that at puberty, the woman had attained her full growth; that her system did not require then the same supply of blood as formerly; consequently there was a redundancy of the fluid, and hence the menstrual flow.

If this opinion were true, men ought to menstruate as well as women; for if there is a superabundance of blood in one sex at that period, there ought to be in the other. From the fact of this discharge taking place monthly, some have attributed it to lunar influence; but if such was the fact, all women would menstruate at the same period, making a universal flood tide. Again, this

have established that it was the mechanical consequence of the erect attitude; or that it was originally artificially produced by the fashionable regimen and thence propagated from generation to generation.

Therefore, whatever may be the views and opinions advanced concerning that matter, it should be recollected that the function is a natural one, though it may not be explained with certainty, that it is necessarily and vitally connected with the constitution of the female; that not only her own well being depends upon it; but also the generative power by which the world is to be multiplied and replenished.

As a general rule very healthy

woman, after the age of puberty, except she be pregnant or continues to give suck, menstruates. The signs indicate its approach are a heaviness in the head, lassitude in the limbs, and darting pains through the mammae.

Its duration is from three to five days. Upon its development the woman is in a fit state for conception; and after its subsidence impregnation is impracticable. The fact, that the propagation of the species is confined to the most vigorous part of life, is another evidence of wisdom and design on the part of the Creator; for did it happen before puberty, or after the cessation of the menses, the critical age, periods, when the system is

inadequate to furnish a sufficient quantity of nourishment for the young, we might calculate that the race of man would degenerate, and dwindle down to pigmies and dwarfs. The changes which take place in the constitution, and the appearance of the woman upon the flowing of the menses is very remarkable. Until then the sexual organs remain very small, perform no functions, excite no passions, - even they are perfectly developed, and capable of performing the functions assigned them. Every one must have observed at this period the change in the external appearance of the female, the enlarged breasts, expanded pelvis, rounded form, and graceful carriage, the

expressive countenance, agreeable conversation, and subdued and mellowed voice. All have seen at this period the school girl, as if by magic, blooming into the loveliness of womanhood; - with grace in every step, - heaven in her eye; in every step; gesture, dignity, and love.

The next function, in order is conception.

Conception. By this function is understood the impregnation of the ovum of the female, and its passage into the uterus. To accomplish this end it is necessary that there should be a union of the sexes for the purpose that whatever they furnish for the reproduction of individuals like themselves may come in contact, or brought

in such a relation the one, with the other, as that impregnation may speedily follow. It is pretty generally believed, that the semen of the male, possesses the property of stimulating or vivifying the ovum of the female; indeed the fact, that the individual, after the removal of the testicles, is totally incapable of procreation, is sufficient to establish this opinion beyond the possibility of a doubt. In like manner the woman is rendered barren by the removal of the ovaries; proving thereby, that they are indispensible in the function of generation. Clear as it is then, that the male furnishes the semen, and the female the ovum; and that the former impregnates the latter, it remains to be explained how so important a result is

affected. Upon this point, as upon many others, physiologists are not at all agreed. Some maintain that the positive contact of the sperm with the ovum is necessary for fecundation, of these some say the contact takes place in the uterus, another in the ovary. Others contend, that the contact of the sperm and ovum is impracticable; but have admitted, that there was a vapour or emanation, aura seminalis, from the sperm, that this found its way to the ovum and fecundated it. Others, again, advance the opinion that the sperm is thrown into the vagina, absorbed by vessels of that canal, and finds its way to the ovarium through the medium of the circulation. Of all the theories given upon this subject, I regard the latter as the most unlikely; for if

This was really the case, might there not be a possibility of impregnating the female, by injecting semen into any of the blood vessels.
In relation to the apparently plausible theory advanced and sustained by the eminent Physiologist Spallanzani, of the aura seminalis being the fecundating principal it now, since the research of more modern obstetricians utterly denied. By a careful examination of semen under the microscope with a magnifying power of three or four hundred diameters, the spermatic fluid exhibited quite a number of little bodies, lying together, and which are still moving with more or less activity if the fluid be taken from a recently killed animal; these bodies have been designated as the spermatic animalcules, or

the spermatozoa. Therefore of all the theories advanced by different authors, I am strangely inclined to the opinion first discribed as being the most plausable; that an actual contact of the semen of the male with the ovule of the female is indispensible for fecundation; as numerous experiments practiced upon living animals, and observed in the human species have proven that any obstacle which prevents the contact of these two elements, renders a conception impracticable. It appears, that after a fecundating copulation, the vesicles in the ovaria, are sensibly elevated; forming nipple like projections, which finally burst, and allow their ova to escape.

They are then grasped by the fimbriated extremity of the fallopian tubes, and conducted to the cavity of the

uterus. The time required for their passage thither, is not positively determined: some say as early as the fifth and sixth; others, not before the twelfth day. It is thought that a motion, something similar to the peristaltic motion of the intestinal canal, is set up in the tube, by which the impregnated ovum is conducted from the ovary into the cavity of the uterus.

Gestation, next claims our attention. By gestation, is meant the period of time which intervenes, between the instant of fecundation, and childbirth. According to our arrangement, we will first notice the changes peculiar to the uterus, and then of those peculiar to the ovum and foetus. During the first months of pregnancy, the enlargement of the

uterus is but trifling; but in the fourth month, the increase is more rapid.

It then becomes so large to be contained in the cavity of the pelvis; and consequently rises up into the hypogastrium. From this time, on to the end of the eighth month, it gradually enlarges, and at last an immense sac, filling up the anterior part of the abdomen, from the pelvis to the epigastrium. After the eighth month, the fundus descends from the epigastric region, down towards the umbilicus. After the seventh month the cervix-uteri becomes very much shortened, and almost entirely disappears. The organ, instead of being of a conoidal shape, is now decidedly ovoid, and is about eleven and a half times greater than in the virgin state.

At its full period, it is said to be about a foot in length, eight or nine inches in diameter, and twenty six inches in circumference on a level with the fallopian tubes. Its weight is received from a pound and a half to two pounds. These changes in the form, size, and situation of the uterus, affect, materially, the parts in connection with it. The neck of bladder is somewhat drawn up, the broad ligaments unfolded, and the round ligaments put upon the stretch, which has a tendency to draw the uterus forward, and prevent the compression of the great vessels of the abdomen. As the uterus increases in volume, its parieties do not become thinner, but often absolutely thicker. Immediately after impregnation, the uterus is lined with

an albuminous substance, membrana decidua; the use of which, it is thought, is to nourish the embryo, and preserve its vitality, until the developement of the placenta. As these changes are taking place in the uterus, many important ones may also be observed in the mother. The menstrual flow is suspended; a disposition to nausea and vomiting in the morning prevails; the mammae enlarge, and darting pains are felt shooting through them; the areola around the nipple assumes a darker hue; the abdomen gradually enlarges; and the end of the fourth month, quickening takes place, or the motion of the child is first felt. After the ovum had arrived into the cavity of the uterus, it becomes connected with this viscus, for the purpose, no doubt, that it

may obtain the nutritive fluids necessary for its developement. The manner in which this connection takes place will be spoken of presently. The ovum consists of the following parts: the chorion, the amnion, the liquor amnii, the placenta, and the funis umbilicalis; all of which, claim our attention, because they form its parietes, attach it to the uterus, connect it with the foetus, and are conducive to the nutrition and developement of the new living.

The chorion, is the outermost membrane of the ovum;-- at first it is thick, opaque, and flocculent; but as gestation advances, it becomes very thin and transparent. It is reflected over the foetal surface of the placenta, and gives a coat to the funis umbilicalis. The shaggy and

flocculent structure, it at first presents, appears to favour, to a considerable degree, the adhesion of the ovum to the surface of the uterus, by which, through the medium of the placenta, it receives its proper nourishment.

The Amnion, is the inner envelope of the foetus in utero, and very much like the preceding membrane, both in appearance and structure. At first they are separated from each other by a fluid, resembling the liquor amnii, which gradually disappears. Like the chorion, it covers the foetal surface of the placenta, and enveloped the umbilical cord. No vessels have been discovered in either of these membranes; yet it is thought they contain vascularity. The Liquor Amnii; this is the name given to the

waters contained within the amnion; in which the foetus floats. At first it is transparent; but at the end of gestation, it has a milky appearance, and often assumes a greenish yellow cast. Its quantity, in proportion to the size of the embryo appears to be greatest in the earlier periods pregnancy. At the time of parturition, in some cases, it amounts to four pints; whilst in others again, it scarcely equals as many ounces. In relation to its origin, it was once supposed to be an excretion from the foetal body, either urine or perspiration. It is now regarded as a secretion from the inner surface of the amnion. Its use is to prevent pressure, by keeping the surrounding

parts distended, to afford a soft bed, and allow a free motion to the foetus during pregnancy; and also to favour dilation of os uteri, and to lubricate the vagina and external parts during parturition.

Placenta. This is a flat, spongy, vascular body, attached to the internal surface of the uterus, and connected with the foetus by the umbilical cord. At the full period, it is generally estimated at from six to eight inches in diameter, twenty four inches in circumference, and an inch in thickness at the centre, gradually growing thinner towards the edge, and weighing from a pound to a pound and a quarter. It has two faces, a foetal and maternal. The foetal face, is covered by the reflexa decidua, the

chorion, and the amnion; the maternal by the decidua vera, The former is in direct communication with the vessels of funis umbilicalis; the latter with the vessels of the uterus; and is divided by irregular furrows, into several lobes. Of all the foetal appendages, the placenta, perhaps, is the most important;- although very different opinions have been expressed, in relation to the office it performs. I am, however, strongly inclined to believe, that it is the principle medium of communication between the parent and the child; that it is the organ through which the infant derives its nourishment, increases its growth, and acts as the preserver of life. Some have said, that the foetus is nourished by the liquor amnii. To me this seems

very improbable, as it is more reasonable to suppose, that the mother furnishes the nourishment for the foetus, than the foetus furnishes it itself. Again; we can assign some valuable use to the liquor amnii, even though we deny its possessing any nutritious qualities, some of which have been adverted to;- but the use and function of the placenta is unknown, if it does not supply the materials, upon which the life and growth of the foetus depends. The funis umbilicalis, or naval string, is a rope like cord, running from the body of the placenta into the umbilicus of the foetus. It is composed of three vessels, two arteries and one vein; and peculiar jelly like substance. It is surrounded as we have stated by the chorion and

amnion, and measures, upon an average, about twenty inches in length. The arteries are larger than the vein, and run in a spiral direction round the vein, most generally from right to left. Through this cord the circulation is maintained between the mother and the foetus. The blood flows along the umbilical vein, from the placenta to the foetus; one part enters the vena porta, and is carried to the liver, the other, passes on through the ductus venosus, to the vena cava inferior. In the foetal heart, one opening exists between the two auricles, called the foramen ovale; - In consequence of this opening, both auricles are filled at the same time, and upon their contracting at the same time, the blood is forced into both ventricles.

From the left ventricle the blood is propelled into the aorta; from the right, into the pulmonary artery. The blood is returned from the foetus to the placenta, by branches, or it may be said, the continued trunks of the internal iliacs arteries. The abode of the ovum, for the first few weeks, in the cavity of the uterus, does not produce any change in its appearance worthy of note; at least it presents no indication that it contains the germ, from whence will spring a man to stud the world. It still continues to be filled with a transparent and fatty coagulable liquid. After this, however, certain opaque points, and two minute vesicles, united together by a pedicle, one of which adheres to the amnion by a small filament, are to be seen.

In the second month, most of the parts of the foetus exist; the head is quite visible; two large black points represent the eyes; and minute openings point out also the dilatation of the ears and nostrils. In the third month, the lips, nose, eyes, extremities, &c. are formed, the fingers and toes being quite distinct; the genital organs undergo a remarkable growth; and the brain and spinal marrow are considerably developed. The weight is regarded to be two and a half ounces; length three and a half inches. By the fourth or fifth month, the development of all the principal organs have taken place, and the stage of the embryo gives place to the foetal stage. From this time on, through the sixth, seventh, eigth, and ninth months,

all the parts gradually increase, and assume the form they present after birth. At the end of the ninth month, all the organs have acquired the developement, necessary for the continued and independent existence of the infant. Its length is estimated to be eighteen or twenty inches; weight, six or seven pounds. In relation to the position of the child in utero, it may be remarked, that it is the most easy, and compact, as well as the most favorable to delivery, that could possibly be desired. The body is bent forward; the head is situated towards the os uteri; the chin rests upon the chest; the arms are thrown in front and crossed; the thighs are bent upon the belly, and the legs crossed and flexed upon the thighs. The figure, in consequence of this arrangement of parts, may be

regarded as being an oval. The last function to which we in is attention to, is Parturition. By this function is meant the expulsion of the foetus from the uterus. As early as the end of the seventh month of utero gestation, it is said, that the foetus is capable of taking upon its self, an independent existence, although it is not common for labour to occur, until the expiration of nine calendar months. If from any cause, the foetus be expelled before it is able to maintain a separate state of being, the process is termed abortion, or miscarriage: if expelled between this time and full term, it is called premature labour. Labour is brought about, and the expulsion of the foetus effected, principally by the action of the uterus itself, but is assisted also by the contraction of the abdominal muscles. This uterine

action is perfectly involuntary; and the causes that give rise to it, admit of no explanation. Like the preceding functions, it is necessarily and essentially belongs to the uterus. The symptoms which indicate the approach, and the actual commencement of labour, are; a subsidence of the uterine tumor; and increase of moisture and tumefaction of the vagina and external organs; a peculiar degree of mental anxiety; irritability of the rectum and bladder; nausea and vomiting; a sanguineous discharge from the vagina; and lastly, the peculiar bearing down pains of childbed. To facilitate the study of this uterine action, most writers are in the habit of dividing it into several periods or stages. By some it is divided into five, and by others, into three stages. I prefer the latter division.

force; the mouth of the uterus becomes gently dilated, and the membranes containing the waters may be felt protruding in the form of a pouch. After a few more pains the membranes are ruptured and the liquor amnii is evacuated. Second Stage. The rupture of the membranes, and the discharge of the liquor amnii, is usually followed by a respite of pain; but after a while, they return with increased activity, and are attended with with considerable bearing down effects.

At the commencement of labour, the head of the child descends through the superior aperture of the pelvis; with the occiput towards the left acetabulum; but during the expulsive throes which succeed, it descends laterally, the segment of a circle, the face turning into the hollow of the

The three stages of labour are divided as follows. First stage;- from the begining of labour pains to the dilitation of the os uteri;- Second stage;- from dilitation of the os uteri to the expulsion of the fœtus;- Third stage;- from the expulsion of the fœtus to the expulsion of the secundines. First stage. During the first stage of labour, the os uteri gradually dilates, and its edges become thinner. At first, slight pains are felt in the loins and abdomen, called flying pains. After awhile, pains of different kinde come on, originating in the back and loins, and extending down towards the os uteri. These pains at their commencement recur only, after long intervals; but as labour advances, they are more frequent; and of longer duration. During the presence of these pains, the uterus contracts with considerable

At the proper period the umbilical cord is then to be tied, at about three fingers breadth, or about one inch and a half or two inches from the umbilicus, and its division effected.

Third Stage. After the expulsion of the foetus, there is gradually a subsidence of pain, and the woman is permitted to enjoy an interval of repose. After a few minutes, however, action is again established, the uterine contraction returns, with less power however than before, and slight bearing down pains are felt. These continue but a short time, when the placenta, and the membranes of the ovum are expelled, and with their expulsion, the third stage of labour is ended, and delivery completed. In the first two

sacrum, and the occiput behind the pubes. In consequence of these different positions of the head, its long diameter comes in contact, or is brought to correspond with the long diameter of the pelvis; without which adaptation, delivery would be impossible. During this time, the pains become most active and forcing; the female is in a state of extreme agitation; perspiration flows in abundance; the pulse becomes stronger, and quicker; and every effort is made by the patient to aid the uterine energies. As these continue, the head presents itself to the outlet, the occiput is pushed backward, and the perineum distended. The passage of the head through the vagina, is soon followed by the rest of the body, on account of smaller size.

or three weeks after delivery; the female is generally left in a state of debility and fatigue; her mammae becomes distended with milk; and a discharge from the vagina, called the lochia takes place; the uterus by degrees contracts upon itself, and the other parts gradually return to their former condition; so that, at the end of a month, it would be difficult to say, how recently the woman had been in labour.

Having spoken of the uterus, and of its functions in the order in which they stand, Menstruation, Conception, Gestation, and Parturition, I will now bring my work to a close; hoping, that the fact of my being a learner, instead of a teacher, will be a sufficient apology for any errors, that may be discovered by the reader.

By. E. K. Foreman. 1861 & 62

An Inaugural Dissertation

on

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Samuel L. Frank

Anaesthesia.

The idea of saving by some artificial means the human body from the pains and tortures inflicted by the knife of the surgeon is by no means a thought either first broached or first acted upon in recent times, as we find that as far back as the twelfth and thirteenth centuries Hugo of Lucca used and his pupil Theodoric (who died in 1298) has described a somniferous ball or sponge, "Spongia somnifera" the vapours raised from which were capable when inhaled, of setting patients into an anaesthetic sleep during surgical operations, this somniferous ball was made by filling and imbibing a sponge with dried extracts of mandragora, opium and other sedatives; and when required for use the sponge was dipped for a time in hot water, and the patient made to breathe the vapour thus raised from it until an anaesthetic sleep was produced.

Cannabis Indica and Virgin [illegible]

were also used to prevent pain many hundred years ago. Sir Joseph Banks observed, half a century ago of Cannabis Indica, that it was taken in Barbary, if it could be obtained by the criminals condemned to suffer amputation and it was said to enable them to bear the rough operations of an unfeeling executioner.

Mandragora was also used by the ancients, Dioscorides eighteen centuries ago says of it, "It is given to cause insensibility in those who are to be cut or cauterized; for being thrown into a deep sleep, they do not perceive pain". but Aretaeus, speaking of it, says, occasionally the patient may die convulsed. Perhaps the frequency and fear of this result may have been the cause of its falling into disuse, but for our present use of anaesthetics we are indebted to Drs. C. T. Jackson and W. T. G. Morton of Boston, two American Physicians, for they first discovered Sulphuric Ether to be an anaesthetic and used it as such in the year 1846.

In the greater operations of surgery, the employment of anaesthesia is not only, thus far, a great blessing to the patient, but it is a great boon also to the practitioner, for whilst it relieves the one from all the feelings of agonizing pain, it relieves the other from the feelings of inflicting such pain upon a fellow creature. Hitherto the professional duty of the surgeon has compelled him to inflict present suffering upon his patients, with a prospective view to their own ultimate benefit and advantage, and, surely there is no one, however much inured to the sight and shriek of pain who does not rejoice that he has now an agent to obtain these advantages for his patients, without compelling them to pass through so severe an ordeal as the tortures of the operating table.

Anaesthetics are agents which prevent feeling and sensation if carried far enough. This effect is produced by their being received into the lungs in the form of vapours or gases, and then carried with the blood to the nervous

on which their action is exerted first on the Cerebrum then the Cerebellum, then on the Spinal marrow, and ultimately, if the quantity inhaled be sufficient the medulla oblongata has its action suspended or destroyed, respiration ceases and death is the consequence.

Different agents have been used as anaesthetics among them may be mentioned Chloric Ether, Compound Ether, Chlorohydric and Nitric Ethers, Bisulphuret of Carbon, Chloride of Olefiant Gas, Benzin, Aldehyde, light coal tar naphtha and numerous others, but those principally used now in this Country and Europe are Sulphuric Ether and Chloroform and with them alone I shall be occupied, having often seen the action of Chloroform I will give the history preparation and effects of that agent first.

Chloroform.

This fluid was discovered in the year 1831 by Mr Saml Guthrie, of Sackett's Harbour New York and about the same time by Soubeiran in France and Liebig in Germany, its true chemical

composition however was not ascertained until Dumas and Peligot directed their attention to the subject in 1834–35. It consists ultimately of 2 atoms of Carbon 1 of Hydrogen and 3 of Chlorine ($C_2 H Cl_3$), but in accordance with the generally received opinion of chemists it may be described as a compound consisting of 3 atoms of Chlorine with one atom of a bicarburet of hydrogen called formyle, or in other words to be a terchloride of formyle, the formyle is the hypothetic base of formic acid which Mr Samuel Fischer long ago distilled from the body of the red ant or formica rufa.

When this fluid was first discovered by Guthrie Soubeiran and Liebig their only object was the investigation of a subject in philosophical chemistry, consequently, it was some years before its virtue as an anaesthetic agent was discovered.

According to the U. S. Pharmacopoeia it is obtained by distilling a mixture of chlorinated lime (~~chloride of lime~~) water and alcohol. Two liquids are condensed in the receiver, the heavier of which is chloroform

This having been seperated, and washed successively with water to remove alcohol, and a solution of carbonate of soda to remove chlorine, is agitated with dry chloride of calcium in order to seperate the water, and then again submitted to distillation. The product now obtained is pure chloroform. It is generated by reaction between alcohol and the chlorine of the chlorinated lime.

Chloroform is a clear, colourless, limpid liquid; heavy; of a fragrant ethereal odour, and a sweet somewhat pungent and agreable taste, and of a specific gravity of 1.49, not inflammable; very volatile, it boils at 142° Fahr. the density of its vapour is 4.13. or it is about four times heavier than atmospheric air. It dissolves very sparingly in water, to which it imparts its sweet odour and taste; but it mixes in all proportions with alcohol, it is a powerful solvent, speedily dissolving camphor, gutta percha, wax, resins &c. it yields on an average 240 drops to the fluid drachm. It is often found impure containing empyreumatic oils, chlorine, free muriatic acids &c. which are

contaminated it is liable to produce headache cough nausea &c - Chloroform when left exposed for some time to the combined influence of heat and light will sometimes spontaneously decompose hence in warm climates it should be kept in a cool and dark place.

The honour of having first proposed and used Chloroform as an anaesthetic in Surgery and Midwifery belongs to Dr James Y. Simpson of Edinburgh, it was proposed by him in the year 1847, one year after Drs Jackson and Morton had used Sulphuric Ether as an anaesthetic.

Effects from inhalation. When inhaled in small quantities only, and slowly, the influence of Chloroform upon the system is exhilarating and intoxicating, like the influence of alcohol, or any diffusible stimulant.

When inhaled in larger and continuous doses, with the view of suspending pain in surgical, obstetrical or medical practice, its effects are generally as follows:- After a few inhalations, there supervenes a feeling of warmth and exhilaration, radiating from the

heart towards the extremities, but generally perceived first in the extremities themselves. In most persons, this feeling is speedily followed by a sensation of vibratory thrilling and benumbing throughout the body, and by affections of the organs of sense as by loud whirring noises in the ears, or brilliant lights before the eyes.

After one or two additional inhalations, there is a rapid loss of sensation and voluntary motion, and at last a total suspension of consciousness. The state induced is a condition of deep, artificial sleep. During this anaesthetic sleep, the relation between the mental condition of the patient, and his insusceptibility to the feeling of pain, differs much in different individuals, and is greatly regulated by the amount of dose that is used. When the dose is at last full and complete, and such as is now usually given before most great surgical operations, no mental action appears to go on, or at least, none whatever is remembered. In other persons, however, and especially when the dose is not so great and complete, though well consciousness of pain is suspended, the mind is still active, and dreams;

and occasionally, though rarely, this peculiarity is observable, viz. that the same type of dream recurs to the same individual every time he is subjected to the anaesthetic vapour. Sometimes when the dose of chloroform is not sufficiently great, a patient will wince or cry out under the use of the surgeons knife or cautery, and afterwards on awaking, declare that he has felt nothing. In such cases, a certain amount of sensibility and consciousness appear to remain, but the memory of the patient subsequently retains no recollection whatever of any circumstances that have happened during his temporary anaesthetic sleep. Persons occasionally will talk ramblingly when subjected to an incomplete dose; but this rarely happens, except some of those around are conversing and exciting the patient; and it can be readily arrested by an additional dose of the anaesthetic and by enforcing quietude. In other persons, again, sometimes, when the dose is small, sensation is found to be suspended, and freedom from pain obtained, whilst still a greater or less

amount of mental consciousness and intellectual activity and clearness remains. Their sensibility to suffering is more or less completely deadened, while their intelligence is preserved. The muscles of voluntary motion usually become more and more relaxed as the intensity of the anaesthetic effect increases, and at last their action can always be thoroughly suspended — a matter of great surgical moment in relation to the reduction of dislocations. But occasionally before this total relaxation is produced, a state of spasm supervenes, particularly if the patient is held and restrained, or excited by talking and noises during the inhalation of the chloroform. Generally the pulse is increased in frequency during the first inhalations, but when the system is fully brought under the influence of the anaesthetic it decreases to its natural standard, or even becomes slower than natural; and few persons are able to bear with total impunity the wounds of a severe surgical operation until the anaesthetic vapour is given to such an extent as to have reduced the pulse to this degree.

The respiration, though unaffected at first, becomes slower and deeper as the influence of the anaesthetic increases; and usually it is rendered soporose before any great surgical operation is begun. The temperature of the body decreases when the action of the chloroform is long continued.

The rapidity with which the effects of chloroform upon the mind and body disappear is perhaps not less wonderful than the rapidity with which they supervene. Generally the awakening from the anaesthetic sleep is in the course of a few minutes after the inhalation is arrested. When the patient is left undisturbed he usually awakes to a state of perfect consciousness; but sometimes, particularly if roused artificially or too early, a few minutes will elapse before he is perfectly master of his own state and situation. When the drug used is pure no headache follows, in some cases there is left a tendency to sleep.

The inhalation of chloroform is now extensively employed by professional men to fulfil various

purposes in the practices of surgery, midwifery and medecine.

In Surgery it is employed with different indications as 1. and principally, to avoid and abolish the pain and agony attendant upon the various surgical operations, whether performed with the knife caustic, ligature or otherwise. 2. In enabling him to make a clearer examination and more accurate diagnosis in difficult cases of injury and disease as fractures, dislocations, stone &c. 3. By relaxation which a full doze produces, the reduction of dislocations hernia &c is much facilitated and simplified. 4. The removal of patients who have suffered severe injuries or wounds to their homes or hospitals can be accomplished without pain and without danger. 5. The agony of dressing burns and amputations is abolished. 6. Under its use amputations and other operations required after severe injuries or wounds can be sometimes performed when without it the state of shock and depression would render the operation fatal, and lastly the mortality from operations since its introduction has been greatly lessened.

In Midwifery various important objects are gained 1. It saves the Mother from the suffering attendant upon the process of common parturition, and that without placing his patient in a degree of anaesthesia by any means so deep as is required in surgery. 2. In morbid or difficult cases of labour, requiring manual or instrumental interference, the state of anaesthesia enables him to apply that interference without pain to his patient, and generally with much greater facility to himself 3. By its relaxing effects it renders the dilatation of the maternal canals more easy, especially where these canals have any tendency to spasmodic rigidity and contraction. 4. In cases where arrestment of uterine action is a matter of great importance, as in the operation of version &c. a very complete and very deep dose of chloroform enables us to attain this object far better and more speedily than by opium or other means 5. chloroform seems capable of reducing and keeping in abeyance one of the most common and most fatal complications in difficult labour namely puerperal convulsions, and lastly by saving the constitution of the patient from the

pain attendant on the process of human parturition, it saves her strength and constitution, expedites her convalescence, and renders her proportionately less liable to the various affections which occur in the puerperal state.

In Medicine the inhalation of Chloroform is employed for various purposes. 1. As an anodyne or anaesthetic in severe and exhausting pains, whether inflammatory or neuralgic, as in earache, toothache, pleurodyne, tic douloureux &c. 2. As a narcotic in delirium tremens, of puerperal and other forms of mania and in other diseases where there is wakefulness and excitement. 3. As an antispasmodic in colic, dysmenorrhoea, laryngismus stridulus, asthma, hooping cough, the pains attendant on the passage of biliary and renal calculi, in chorea, tetanus, hysteria, and in infantile and other forms of convulsions. 4. In small doses as a diffusible stimulant to arrest the first commencement of the rigor in ague, and lastly it has been used by some French and German Physicians in inflammatory affections like of the head, chest and abdomen. By Dieuntrapp in the hospital at Frankfort and elsewhere, small and

frequently repeated inhalations have been employed in Pneumonia, with the effect of more marked relief to the cough, pain and fever, and a speedier resolution of the disease than under any other treatment with which it was contrasted.

Chloroform is administered by the Stomach also by Physicians. In this form it exerts the same therapeutical effects as by inhalation, but in a less marked and more prolonged degree. The usual dose when swallowed is from 5 to 20 drops dissolved in a mucilaginous or oily liquid

In the detection of feigned diseases chloroform has also been successfully used

The advantages which Chloroform possesses over the other anaesthetic agents hitherto discovered are various. 1. A smaller quantity of chloroform than of other anaesthetics is required in order to produce the state of anaesthesia; its action is more perfect and more certain. 2. It acts rapidly and consequently with a comparatively short stage of excitement. 3. its inhalation is infinitely more agreable than the inhalation of most other anaesthetic gases or vapours. 4. Its odour is rapidly evanescent, and does not adhere

the clothes of those near it, giving it in this respect a great advantage to the Physician over the persistent and disagreeable smell of sulphuric Ether &c — and lastly no special instrument requires to be used in its exhibition.

For surgical operations a larger and more rapid dose is necessary than in obstetric practice; whilst in midwifery it is necessary to give it in smaller quantities but for a greater length of time than in surgery. Numerous instruments have been devised for the exhibition of chloroform, but they no doubt complicate the process, in my opinion the simplest as well as the safest apparatus is a towel or handkerchief.

For inhalation the medium dose usually employed is a fluidrachm which should be diffused upon a towel or pocket-handkerchief, and should be applied over the mouth and nose of the patient, in about two minutes if perfect anaesthesia has not taken place another fluidrachm may be added, and so on until perfect anaesthesia takes place. At first the handkerchief ought to be held at the distance of half an inch or an inch from the face of the patient, in order

free access of air to the mouth and nostrils, and after=
=wards it should be gradually approached nearer. In order that the patient may be brought speedily under the influence of the drug, the vapour should be allowed to pass into the mouth and nostrils. The tests of full aetherization that are usually most relied on are slowness of the pulse or some noise in the respiration when these symptoms occur the handkerchief should be immediately taken away, smaller and intermitting doses are afterwards required to keep up this state. It is sometimes given in such small doses or so slowly as to keep up a state of excitement, instead of inducing a state of anaesthesia. Surgeons also sometimes commit the error of operating before perfect anaes=
=thesia has taken place.—

In Midwifery practice, there are two peculiarities in regard to its exhibition namely, first, that it is given to the patient only when the parturient action or pains are present, and is always totally or entirely withdrawn in the intervals between those contractions or pains and secondly it does not require to be given in

so large and full doses as in surgery, except where severe obstetric operations are to be performed, and it has been proved from ample experience that it may be given in obstetric practice for six hours with perfect safety.

In the treatment of medical diseases it may be used for a much longer time. Patients suffering under Tetanus, Peritonitis &c - have been kept under its influence for two, three or more days. Dr Simpson narrates the case of a child affected with infantile convulsions which was kept under the influence of chloroform with slight intermissions, to allow of food being taken &c - for fourteen days with the effect of arresting the fits and ultimately saving the life of the little patient.

It is generally believed that anaesthetics are contraindicated in persons labouring under disease of the valves of the heart, or fatty degeneration of the walls of that organ and also diseased states of the brain, it should also not be given shortly after meals; otherwise

sickness and vomiting are liable to follow.

In the way of caution the points that demand principal attention are 1. The drug employed should be as pure as possible 2. a free intermixture of atmospheric air should be allowed to enter with the vapour of chloroform. 3. its action should be suspended and the handkerchief should be withdrawn as soon as stertor supervenes or the pulse becomes languid and falls much below the natural standard.

Deaths now and then occur to patients under the influence of chloroform as well as from many other articles of the Materia Medica, and on this account instead of abolishing this article from the Materia Medica (as many physicians have declared it should be) it should be used with greater caution and the person using it should try and get it as pure as possible.

From the returns of the Registrar-general of Great Britain it appears that in England and Wales alone annually from three to four hundred patients are

poisoned by Opium alone, and I believe that since the introduction of Chloroform & Ether as anaesthetics not half that number of deaths have taken place from the use of those articles; on the other hand we know that it has been a great means not only of saving human life but also of saving human suffering by diminishing the danger and fatality of surgical operations.

"Appearances after death from poisoning by inhalation: the most prominent morbid appearance after death is venous congestion in the lungs and sometimes in the brain, the heart is often soft and flaccid the blood is fluid and sometimes dark coloured.

Treatment of Poisoning by inhalation. When too large a dose has been given, the following means of recovery should be used 1. The handkerchief should be immediately taken from the Patient 2. the supine position. 3. The free access of pure air 4. the dashing of cold water on the face and head 5. The performance of artificial respiration, and the tongue should be pulled forwards if it has

fallen back on the top of the windpipe. 6. No liquid should be poured into his mouth until he is able to swallow.

Locally chloroform is applied, either alone or mixed with Oil and it is thus one of the most powerful sedatives which we possess, when applied locally it produces at first a painful burning sensation, with more or less rubefaction, in a short time this ceases and is followed by more or less entire loss of sensibility in the part with relief to any pain, which is often sudden and complete, it is often used to relieve rheumatic, neuralgic and other severe pains.

Sulphuric Ether.

Ether consists of 4 eqs of Carbon 5 of hydrogen and 1 of oxygen (C_4H_5O) or 1 eq of Ethyl (C_4H_5) and 1 of oxygen.

It is a colourless liquid of the specific gravity of 0.712. its odour is strong penetrating and rather grateful; its taste hot and pungent, it is extremely volatile and very inflammable.

The credit of having first discovered Sulphuric Ether to be an anaesthetic belongs to two American Physicians namely Drs. C. T. Jackson and W. T. G. Morton of Boston, Massachusetts; the former conceived the idea of using Ether as an anaesthetic and the latter carried it into effect. In October 1846. the attention of the profession was called to this discovery, Dr. Morton used it for the relief of pain in dentistry, but Dr. John C. Warren was the first to test its efficacy in a surgical operation on the sixth of November, it was suggested first in medecine by Richard Pearson in 1795. and he employed it in Asthma, Phthisis and hooping cough &c. In 1816 Nysten described an instrument for the inhalation of sulphuric ether.

Having written fully on chloroform, I think it unnecessary to go over most of the same ground again, as Ether acts almost like chloroform, and is less dangerous, but on the other hand, has the disadvantages which I mentioned on page

fifteen and sixteen, It is hardly ever used in this city or Europe as an anaesthetic.

There is one other consideration in favour of chloroform, which I have not mentioned yet. namely, that by the quietness of the patient, the surgeon has a better command of success and thus may save the lives of some of his fellow-creatures, which, from the turbulent state of the rival anaesthetic would perhaps be lost.

An
Inaugural Dissertation
on
Respiration:
Submitted to the Examination
of the
Provost, Regents, and Faculty of
Physic,
of the University of Maryland,
for the Degree of
Doctor of Medicine,
By
Grandison W. Young,
of
Maryland.

February 1862.

Respiration.

This function of the living body is one of the principal and most essential to its existence: the great object of which is to furnish the animal with air and its elements, of which there is continual need to maintain existence.

This is even the case in the lower order of animals and reptiles; a certain amount of air is received by the numerous openings or mouths differing according to their variety or mechanism themselves as from the human genus.

The bile of the battery element and a constituent of the atmosphere, which is absorbed by coming in contact with the mucous membrane of the gills:

hence by a chemical process as naturally takes place in either element, air & water; much more feeble in the latter than the former; the one we denominate warm, the other cold-blooded animals. Many reptiles are cold; this is because their respiratory surface is small, being limited in number of sanguineous vessels; but in warm-blooded animals, the respiratory apparatus is far in the interior of the body, surpassing nearly that of all other membranes and supplied by numerous vessels conveying the entire mass of the blood. The most important function is the action by which the air in contiguous lungs, causes the life of his tribe; when this action ceases the

animal dies; as the savage of the forest has closely observed while warm blood gushed from the wound to his pleasure; but the bearing of the issue to him is overwatched with the utmost sorrow, in the form of kindness or love, above all complaining cases — when the body is still he yet listens to the breathing — when this act of respiration stops, he feels what nature has done; he knows that life in that living is ended: — not in alone, the wise and the most intelligent take more notice of this function in a living test moments than perhaps any other; its suspension is the peril and the end of life.

In writing upon this subject, it is hardly to be expected that much new may

will be sought; since it would require much elaborate experimenting, and to be well established, perhaps an older and more experienced physiologist; but I shall endeavour to treat this subject in a manner which seems to me the most likely to elucidate this very important vital function of the human system.

It has been known since the days of Harvey, that the blood circulates through the system, and it is also strange to, that it nourishes the many tissues supplying to the functions required, materials necessary for the different functions; and being supplied of its nutritive constituents, it becomes charged with impurities resulting from the deterioration of the vital tissues.

Hence it is necessary that fresh supplies of nutriment should be continually added to the blood to replace and cause the removal of impurities. The first of these means is accomplished by digestion and absorption, and the second is performed by various excretory organs through which are removed the several impurities with which the blood has become charged owing to the degeneration of the tissues, and in some amount, the elements of unassimilated food. One of the most important and obnoxious of the impurities is carbonic acid which is given off by the lungs at the same time that oxygen is taken in: the latter element is the most necessary to the respiratory act: oxygen being without

the lamp of light and life are extin-
guished.

The respiratory apparatus, in this passes is carried on in man claims some dis-
ripline: it is in size corresponding to the cavity of the thorax; each lobule or small subdivision of the lung consists of a mem-
ber of minute branches or air cells which are of an elastic structure, capable of a certain contraction or shrinking, they are beautifully arranged about the bronchial tubes and thickly lined with capillaries derived from the pulmonary artery. The lungs are situated with their summits just beneath the clavicles and resting on the diaphragm; the lobe on the left side is divided into two lobules, making room

for the heart which fills the middle mediastinum. It is scarcely necessary to enter into a full physiological description of this apparatus composing a tree like the trunk of which is the trachea ending at the larynx. The capillary arteries change into capillary veins according to some anatomists and these again into veins of increasing calibre ending into the trunks of the pulmonary veins which deposit their oxygenated blood into the left auricle and from this into the ventricle of the same side and enters into the current that courses through the aorta. Having noticed the vascular, I will now consider the nervous tissue of the lungs which I shall take occasion to revert to in order to explain the

the mechanism of respiration as brought about by the action of the respiratory muscles: two sets of pulmonary branches are distributed from the pneumogastric or par vagum nerves to the lung reaching the root of the lung, one on its anterior and the other on its posterior aspect. The anterior pulmonary nerves are ten or three in number and of small size. They join the filaments of the great sympathetic continued on the pulmonary artery and with these nerves constitute the anterior pulmonary plexus. The pneumogastric lies flattened behind the root of the lung, and gives several branches of larger size than are found on the anterior part — which with filaments derived from the third and fourth thoracic ganglia of the sympathetic, form the

posts in pulmonary plexus. Various small nerves forming the last-named plexus extend along the ramifications of the air-tubes and through the substance of the lungs. The tissues are united or separated from each other by cellular tissue which fills up the interstices about them. The areolar tissue being moistened by lymphatic vapour, is capable of facilitating the expansion and contraction of the parenchyma of the lungs. Prof. Beclard is sustained in his belief: that the cells secreting this fluid have not the same organization as those intended for lymphatic exhalation. The membrane enclosing this complex apparatus is diaphanous and was called serous by Bichat, which is still retained in the lists of his followers: and

it is double like a pocket-net sac without an opening: hence the seat of hydrothorax. The superior, inferior, posterior, and anterior spaces about the pleura are the mediastina. The internal surface of the pleura is continuous throughout and moistened by lymphatic vapour before and behind which facilitates the gliding of the lungs against the parietes in which they are enclosed.

Thus it is seen that the respiratory apparatus may be the seat of dangerous disease from its complexity and the office it has to perform. Placed between the walls of the thorax and the abdomen, it forms part of the chest cavities. It is difficult of access in a surgical point of view; and from the delicacy of its tissue is liable to

inflammation of a tuberculous character, that Therapeutist stands aloof in his skill and pondering retrospects the well-trodden field of medical science. Hence, I consider an early attention to the principal organ of respiration, binding on every student of medicine.

I will first notice how the respiratory movements of the chest affect the circulation of the blood in the arteries, as minutely illustrated by the experiments of Ludwig, who confirms what Walton and Hyrtl have observed and more recently done in my presence by Prof. Swanson of this University, last winter (now U. S. Surgeon) namely: that the strength of the blood's impulse in the arteries is

increased during expiration, in this act the chest is contracted and the large vessels in consequence compressed. The column of mercury in the barometer rises during each expiration and falls during inspiration. In the experiments of Poiseuille, the extent of the rise and fall of the mercury in the instrument was the same in the arteries the distance of which was different from the heart. In ordinary tranquil respiration it amounts to ~~from~~ ten lines — from four to ten. Prof. Ludwig introduced the tube of the barometer into the carotid artery of a dog and obtained satisfactory results, the column rising and falling very perceptibly at

every inspiration and expiration which the dog performs. The decrease of the impulse of the arterial blood in inspiration, in some persons, is so great that the pulse at the radial artery becomes imperceptible when inspiration is long continued and the breath held; but this increase is well shown in expiration in the increased pain and throbbing of a part inflamed during coughing; and also are sometimes ruptured when diseased during violent expiratory efforts.

This proves that the frequency of the pulse summarily do not depend upon the pulse as heretofore held by some of the theorists; but that it is rather dependent upon act of respiration. The effect of the air

introduced into the air-tubes and cells of the lungs has much greater influence on the circulation than mere mechanical action of respiration. As to the action of the respiratory apparatus, may we expect to know something; but the true manner in which it is performed calls for one who is better acquainted with anatomy and physiology than any illiterate performer of the great natural function.

The atmosphere is a mixed elastic fluid diffused throughout all nature. As the two oxygen and nitrogen although four fifths of the air is composed of the latter element it would not sustain life without a fifth of the former, oxygen.

The pressure of the air is communicated

through the glottis to the interior of the chest are sufficient quantity to counterbalance the pressure on the exterior of the chest — thus the glottis is free and it requires the muscular effort of the chest to expel the air within when they instantly expand and the air enters and is again expelled through the trachea and lungs. Inspiration may be performed almost entirely by the diaphragm, which is the case in young children. This is called the abdominal type of respiration. In women the movement appears to be greater in the upper than in the lower part of the chest. This was laughingly noticed by the poet Burns when he laid his hand upon the swelling bosom of his fair one and gave vent to the "bless".

in beautiful verses too well known to be repeated here. This gentle rising of a well-developed chest constitutes one of the chief beauties of the female sex, as every one is ready to admit and the surgeon to well appreciate.

The costal cartilages are the chief seat of elastic power in the walls of the chest, and somewhat aid in the force of inspiration.

There seem to be three grand functions performed by the act of breathing: the aeration of the blood, the pulmonary exhalation, and the production of sound: the last modified by the intellect produces speech, laughing, &c. The aeration of the blood is the first and most important of the three, and common to all animals

furnished with lungs. The amount of air that may be taken into the chest at once depends upon its capacity, differing also in age and in disease. The quantity stated by Mr. Gaathorpe, is from twenty to twenty-five cubic inches; and this in a middle aged man; but Mr. Bourgery is perhaps right in saying that old people, even in health, generally breathe more deeply and change a larger quantity of air than do younger persons.

Mr. Hutchinson has endeavoured to come to some estimate in quantity and weight considering temperature and the stature of the person. He states that a healthy person of [illegible] years of age is capable of inhaling [illegible]

cubic inches more of air than when fifteen; and at sixty it inhales fifteen cubic inches less: so it increases from youth until middle age and vice versa, though not in equal ratio as I understand. The Egyptian observations are only true of men and have to be experimented; for women according to Bourgery have only half the capacity of breathing that men have of the same age. The number of respirations usually range from fourteen to eighteen per minute, in a healthy adult person.

While the act of respiration is carried on the blood is being continually changed: that which flows through the pulmonary artery is venous until it

comes in contact with the capillaries & then it becomes arterialized and flows on giving nutritive materials to the system. The bronchial tubes, glands and walls of the chest are furnished by the bronchial arteries which sanify all these parts: the blood being thus aerated is carried to the pulmonary veins (four) which convey it to the left side of the heart.

In respiration carbonic acid is increased; oxygen diminished; and watery vapour increased. The generally acquire the temperature of the blood before it is expelled from the chest. In experiments on animals found the greatest quantity of carbonic acid obtained at the highest temperatures, & at about twice as much

as the smallest exhaled at the higher tem=
peratures. When pure air is inhaled, the
average quantity given out by the lungs
is a fraction over four per cent of the expired
air; but say Allen and Pepys, if air be
previously impregnated with this gas (what
is often the case in crowds) the quantity ex=
haled becomes much less — the quantity by
night is less than in day. It is increased
by the use of food, and by respiratory
exercise, in moderation, increases it one
third more than when at rest. Oxygen
is diminished in proportion as carbonic
acid is increased. Nitrogen is the
most expansive of all the gases and serves
the purposes of nature rather by diluting
the oxygen mechanically than anything

due to the tissues or the circulation of the blood.

The changes produced in the blood by respiration is a bright red colour which is the most obvious; it is warmer; coagulates sooner and contains more oxygen, less carbonic acid, and less nitrogen — having passed through the lungs. Hence the theory of gases in the blood was admitted by the researches of Magnus several years ago.

In this view of Chemistry, the loss of oxygen to the blood takes place without any little carbonic acid being disengaged — not enough to injure the integrity of the tissues. The acid is furnished only at the expense of the carbon which accumulates in the pulmonary veins, and to which in some measure

is attributed the darkness of the venous blood. There is a de facto chemical process in continual action in the living body somewhat analogous to that in inorganic bodies. It is known that caloric is continually disengaged by the exercise of the functions, and these phenomena are most reasonably referred to a chemical power peculiar to living bodies.

It is truly astonishing how this living chemistry is kept within certain limits, as to temperature, but that it is aided by the vital principle we are forced to admit. If we place a plant in an atmosphere below that of his body, his internal functions go on with redoubled energy; and as more combustible matter is necessary, more materials are wanting as nutritive

becomes more active. In high northern latitudes this process is carried on as perfectly as beneath the equator. Those people of the frigid zones are directed by instinct, as it were, and are capable to consume a larger quantity of oil which contains much carbon and hydrogen that unite with the oxygen of the blood producing combustion sufficient to make them comfortable; those of the southern latitudes are fond of fruits and vegetables because they contain less amount of the two elements, produce less amount of blood and that of a less combustible nature. Hence it is evident that one of the first purposes of respiration is to furnish the animal the means of supplying itself with the materials necessary

in part, to replace those which are constantly decaying and being exhaled and excreted from the system.

From experiments of Davie, he concluded that respiration had rather for its object the cooling than heating the animal economy: but Brousais disagrees with him, and believes with Thompson, that a comparison of different animals completely disclosed to face of this assertion; since, contrary Brousais he knew-thoroughly that the inherent temperature augments constantly with the increase in the size of the lungs. The experiments and observations of Dr. Edwards Brousais adduces to confirm his text: that energy of respiration corresponds with that of calorification —

both these functions being greater in man than in cold-blooded animals; in the adult than in the young; and in winter than summer. It can be nothing more than sustaine. Bichat is so much of this opinion.

We may conclude from what has been said, that by the function of respiration oxygenated blood is carried to all the tissues of the body giving warmth and nourishment to the most distant parts of the organism; supplying the brain with vigour and energy to the exercise of its intellectual functions - stimulating the encephalon, cerebro-spinal and great sympathetic or ganglionic system of nerves, and hence the passions are aroused, emotions originated or continued - the sound and sublime tone

of thought — the glowing countenance. When the blood imperfectly oxygenated and impregnated with malaria, for instance, circulates through the system carries poison, the truth will be attested by phlegmasiæ: intermittents will manifest themselves, and various other acute and chronic diseases. It is well known to the medical profession that the air which animals let into their lungs is often something added to, or something taken from its pure elements; that plus or minus of this impurity will give origin to inflammation in the air-cells — air-passages more generally. Acids in a state of expansion, such as sulphurous irritating powders, & a whole host of chemicals and pharmacopœiaic are most frequently opened, often produce bronchitis and pulmonary catarrhs.

Pericarditis has been produced by the powder of tobacco, in a man engaged in the manufacture of the article. I have seen a young woman who had practiced the filthy habit of "snuffing" until she presented the appearance of a pretty well marked case of pneumothorax, had great shortness of breath induced on the least unusual ~~exposure~~ muscular effort of a few moments duration, to bed in consequence, would tranquilize into no signs of exhaustion. She was so habituated to this powder that it seemed to produce none of its narcotic effects, though taken in large quantities and swallowed which she was in no wise positive to avoid. But the introduction of this into the stomach was not the case in her sallow appearance though producing a certain effect upon the nerves

system. I attribute it to the very fine powder of the snuff which is more or less always mingled with the air and taken into the lungs by respiration; for, in the act of taking a "pinch", it may be noticed – if the article be very dry – that a little cloud often arises and is drawn into the lungs where it is likely to remain irritating the delicate tissue producing its sedative effect and clogging the cells so as to prevent a free access of oxygen to all the capillaries of the organ; which was most likely to have been the case of the lady who presented the appearance I have just related.

All foreign bodies, of which the atmosphere is often the vehicle may as just mentioned impede the aeration of the blood so

as to bring on asphyxias succeeded by inflammations of the trachea-bronchial surface, which is sometimes very difficult to assume. Among the gases some only are injurious by want of oxygen: hydrogen and carbonic acid without mixture, are of this character — they produce asphyxia without inflammation; others by their poisonous nature strike directly at the nervous system and thus produce real poisoning: sulphuretted and phosphuretted hydrogen are of this class; and the miasmata which arise from decaying animal and vegetable matters loading the air of certain districts with the mysterious poison, malaria give origin to the periodic fevers already mentioned. The gases last named, if breathed

in sufficient quantities for a certain time are capable of producing death by the facility which they penetrate and rapidity with which they act on the nervous system. But again: they have been known to suspend respiration and the circulation, when the speedy application of oxygen has restored the patient, but to respirate very slowly and with much difficulty though — life is with them — the phlegmasia affecting the respiratory passages. Though oxygen gives the system that peculiarness characterized by health as indispensible to life; but an excess of this gas becomes a poison. In the language of a celebrated French physiologist this gas in excess in the air we breathe, irritates the vesicles and entire pulmonary

apparatus; it accelerates excessively the circulation, inflames the tissues, and gives rise to fever. The continuous, the pure air, called of elevated regions or places which we know are abundantly charged with this principal, hurries the progress of chronic inflammations that tend to disorganization of the lungs. When the lungs act with too much frequency and energy, the blood is deteriorated by an excess of decarbonization. But the want of this element duly combined or mingled with the other constituents of the air, is why myself and so many other persons of sedentary habits, look pale and become thin in flesh and of a relaxed state of the muscular system. The sitting position often opposes a full expansion of the chest: some

muscles are on the stretch and others relaxed — not giving equilibrium nor rotundity to that system; and being engaged in study and various abstractions, the intellectual faculties give very little aid — if any, which I will consider — to the function of respiration, and a very small quantity of air is inhaled for hours at a time: hence the blood is not duly arterialized by this small quantity in comparison with what the lungs is capable of containing and necessitates to for a few hours each day in natural functions for this reason the equilibrium and rotundity of which the human system is so fond, are invariably overthrown — not amounting in some constitutions to any acute disease for a great length of time, though the stand-

habit is kept up, in persons who have not accustomed themselves to much active exercise especially, though they often have dyspeptic symptoms and a slight error in diet interrupts their digestions. But persons of a more sanguine temperament and who have led an active life, very seldom feel the effects of disease originating from the cause mentioned; especially if they habituate themselves to sedentary habits of idleness, or studious habits of a sedentary nature, and are careful to exercise frequently in the open air much at first; diminishing gradually until they can apply themselves for several hours during the day without much inconvenience. There is loss in weight and the glow of countenance that shows of

a feeble respiration which has deprived the blood of the necessary balancing agent which the lungs are capable of receiving in their continual uninterrupted respiratory function. In active exercise the res= piration is more frequently accelerated than retarded, dispensing blood equality and time to the organism.

It is necessary to notice how the function of respiration is maintained; from whence [illegible] the force necessary for its performance. That it is dependent the nervous system [illegible] of no doubt.

[illegible] function is [illegible] appeal to the [illegible] of [illegible] or the [illegible] calls into action the respiratory muscles

destined to enlarge the cavity of the chest.
Vieussens, who calls it the great
sympathetic &c. The cerebral lobes of the brain
preside over thought, memory, and will as
the intellect says he, and that the cerebellum
is endowed with the function of exciting into
active ministry of locomotion, it cannot
cause them to act in a regular manner
unless it receives the impulse of the intellect
in its turn acts the integrity of the cerebrum.
Respiration is not without a vestige by a lesion
of the hemispheres or lobes of the cerebellum;
hence its dependence on the Great Sympathetic.
When the hemispheres are destroyed the centre
of perception ceases, to be in communication
with the external senses; because they can
not operate on it, (the centre of perception)

without the hemispheres being in communication with the intellectual part — the faculties of intelligence are thus for a barking and stupefying moments yet respiration is continued until the medulla oblongata* is interrupted by the disorganizing instrument: or inflammatory irritation may after a time interrupt the centre of perception and volition and destroy its functions. The continuance of the cerebellum be removed (as done by Prof. Hammond last winter before his class) paralysis of the muscles on the opposite side take place and the animal turns round and round still respiring perfectly — in full possession of the senses and tries to get away in its accustomed manner.

*(The phrenic nerve is very much concerned in the supplying the diaphragm the principal muscle of respiration.

The muscles of respiration are called into action by the centre of respiration but this centre makes them act under different influence (not the hemispheres) nor obedient to the vicera, nor under the subjection of the will.
The great sympathetic is not only in connection with the medulla oblongata by the eight pair of nerves, when the cerebellum and cerebrum are removed; but it communicates with all the nerves of the respiratory muscles; thus the great sympathetic has a double function: awakening the centre of respiration to bring the respiratory muscles into action, rendering them susceptible to stimulation through the influence of the medulla oblongata. Rolando and others [illegible] that there are but two [illegible] required to effect

this function; 1. the communication of the centre of perception with the respiratory nerves; 2. the communication of this part with the dilating muscles of the chest; which Bouillaud thinks are only consensually of those of the glottis in reference to respiration.

I now propose to notice some late established theory on the functions of the Spinal Cord, touching the subject under consideration.

It is well known that the brain is capable of receiving impressions made on its periphery or extremities by some other and when it is taken with no cognizance by the mind; and the spinal cord also and its nerves. The anterior are the motor and the posterior the sensitive nerves

of the cord as shown by the brown diagram. The posterior columns of the cord do not of themselves convey impressions to the brain, but conduct it to the gray substance and by it alone they transmitted to that organ. Impressions are conducted across the cord. Its power as a mere cord, conducting influences, is generally discussed as a reflex function. The cord is generally though not completely independent of consciousness and the will. By its influence the spine and is maintained when the mind is inactive and at rest; but if the lower part of the cord is destroyed it cannot be done by the brain. The respiratory movements may be performed when the mind is fully absorbed in other [illegible] yet in an emergency the mind [illegible]

direct and stimulation thus; and it can adopt the usual acts of singing, laughing, talking, and muscular effort — being for ordinary purposes independent of the will and consciousness. But respiration depends mainly on the medulla oblongata than another part of the encephalon. Legallois says, 1. that the destruction of the brain and cerebellum does not prevent respiration, provided the medulla oblongata be entire; 2. that the cerebrum and cerebellum cannot keep it up if the oblongata be destroyed or effaced, these muscles and the respiratory passages — diaphragm — which contract to produce respiration without, ~~without~~ the cerebro-medullary parts of the encephalon, cannot act without the latter for the power of speaking, singing, and so is to say of obedience to the will.

What I have just called a cord is a function of spinal cord and medulla, in some measure, the oblongata of Bruns. In the medulla oblongata and the cord—which is but a continuation of it—am inclined to adhere to as much as I have said of them. The oblongata is truly a most important organ to life; for if it be wounded in a central point opposite the origin of the pneumogastric nerves, the respiratory movements instantly cease and the animal dies as if asphyxiated. Sir Charles Bell records an instance of instantaneous death from injury done to the human oblongata. I find the existence of the power of reflection in the medulla and the respiratories. The effect of the respiration and arrest of respiration have some consideration. Man is principally [illegible] from one of the

illustration which they afford of the nature ~~[illegible]~~ of the normal process of the function and circulation. When the process of respiration is stopped either by breathing an atmosphere devoid of its usual combination with oxygen, the circulation through the lungs ceases — the right ventricle of the heart becomes obstructed; this prevents the return of venous blood to the heart; and from this succeeds venous congestion of the venous cavities of all the other organs of the body. Thus a small quantity passes through the lungs to the left side of the heart, and that not being arterial is venous, the animal dies from suffocation or asphyxia; and upon examination the left side of the heart is found nearly empty while the lungs and the right side of the heart are engorged with venous blood.

The leading causes of such a death are nearly explained from many things I have previously

said of the process of respiration; but it may be necessary to say that the principal evils of suffocation seem to depend on the retention in the blood of gases. The blood charged with carbonic acid gas cannot pass freely through pulmonary capillaries, as shown by Mr. Wharton Jones' observation on the web of a frog's foot in which the circulation is retarded or arrested by directing on it a stream of carbonic acid under the influence of which the corpuscles stagnate in the vessels. Out of this the stagnation in the pulmonary capillaries would not perhaps be enough to stop entirely the circulation unless the contractions of the heart were also weakened, which opinion is sustained by Mr. Earle's case (Med. Chir. vol. lxiii p. 22) therefore the fatal result is due in some measure to the weakened action of the right side of the heart from over distension

caused by the blood continually into it - partially increased by the powerful efforts to eliminate, made at inspiration; and further because of the distention of the right side of the heart, there must be venous congestion of the medullary convolutions and the venous cavities. But I write medicine with respiration and not a physician.

In taking an abstract view of the human organization, what is more striking than the great prominence to which I have given my attention in a physiological point of view! On the mind of the careless observer - it may often cause a feeling of astonishment to see this action performed by a species of the animal kingdom and consuming to self as a most wonderful action. The blending the beautiful function that maintains the living. What mechanism - what harmony of action!

Thank the omnipotent Creator!